

**REGIONAL GOVERNANCE AND COLLABORATION:  
A COMPARATIVE STUDY ON ECONOMIC DEVELOPMENT POLICY PROCESS  
IN MINNEAPOLIS AND PITTSBRUGH REGIONS**

by

**Joo Hun Lee**

BA, Yonsei University, 1997

MA, Yonsei University, 1999

Submitted to the Graduate Faculty of  
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of the requirements for the degree of  
Doctor of Philosophy

University of Pittsburgh

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**IN MINNEAPOLIS AND PITTSBURGH REGIONS**

Joo Hun Lee, PhD

With increasing competition for economic development, the importance of a metropolitan region as a unit of governance has been recurrently stressed. But in light of a fragmented local political environment, encouraging local governments to participate in collective actions is theoretically unexpected and empirically difficult. How has each metropolitan region dealt with this problem? Are there different patterns of collaboration that are undertaken by each region? And how can we systematically characterize different approaches inherent in the governance of metropolitan regions?

This dissertation states that existing literature on regional governance is not able to answer these questions correctly because they do not acknowledge the multiple dimensionality of governance. Not only the level of structural fragmentation but also the political and cultural aspects of governance should be seriously considered as the significant factor that determines the forms of regional governance.

Two highly fragmented regions of Minneapolis and Pittsburgh are selected as the empirical cases to which theoretical models are tested. From a macro point of view, this study systemizes governance structures in two regions and identifies two models of regional governance: Integrated and Isolated models. In the integrated model represented by Minneapolis, inter-organizational relationships are metropolitan-wide, intergovernmental oriented, and politically and culturally integrated at the metropolitan level. In the isolated model represented by Pittsburgh, this dissertation empirically proves that inter-municipal collaboration is less favored, and the metropolitan region is built upon intergovernmental competition along with high level of vertical integration at state level.

This argument on regional governance is supported from the micro perspective, by empirical analyses on the extent and patterns of inter-organizational collaboration in the field of economic development in the Minneapolis and Pittsburgh regions. Based on the modal approach to governance, this study proves that along with structural factors such as the level of fragmentation and institutional forms of government, the intensity of political integration of local government is also strongly associated with the extent of inter-organizational collaboration. In addition, it also describes the regional differences in the patterns of collaboration and how the inter-organizational networks are differently structured in two regions.

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## **PREFACE**

DEDICATED TO MY WIFE, YOUNG-EUN, AND MY FAMILY

## **1.0 INTRODUCTION**

With the increasing competition for economic development, the importance to of a metropolitan region as a unit of governance has been recurrently stressed. The phenomenon of globalization has blurred the boundaries of nation-states, and at the same time is forcing cities in the US to adjust to both new economic and geographical scales that can maximize collective competitiveness as a whole. But in the light of a fragmented local political environment where no local municipality is likely to sacrifice its autonomy for uncertain collective objectives, encouraging local governments to participate in collective actions is more difficult than might be expected. How can we overcome this problem and create a collaborative culture at the regional level? In other words, how can we increase the level of collaboration among individual as well as organizational actors in metropolitan regions?

Two schools of thought exist with respect to the issue of collaboration within metropolitan regions. Polycentrists define collaboration as a strategic and voluntary joint action. They argue that cross-boundary collaboration is possible only when expected benefits from joint actions surpass transaction costs from inter-organizational interactions. Meanwhile, new regionalists believe that an institutional rules or norms at the regional level function to facilitate collaboration and eventually generate efficiency and collective competitiveness.

Neither theoretical position assures inter-organizational collaboration with a great certainty. However, if collaboration is important for economic development, or if it is the best strategic alternative for sustainable regional economic development, several questions have to be appropriately answered. First, under what conditions will independent local municipalities decide to collaborate with other organizations? Second, what social and political factors influence the extent of collaboration? And thirdly, how are the regional actors connected and to what degree of strength are they interrelated?

This dissertation attempts to demonstrate that there is a considerable relationship between governance structures and the pattern of collaboration. While previous studies exclusively focus

on finding determinants of collaboration at various levels of analyses, this dissertation starts with building an integrative framework for modal approaches to regional governance. The empirical exploration of the relationship between governance structures and the collaboration follows. This study compares the two metropolitan regions of Minneapolis and Pittsburgh, to show that a comparatively hierarchical decision-making system is more effective at mobilizing collaboration of local municipalities on the one hand, and at providing tough “glue” that strengthens intergovernmental network ties on the other hand.

Political mechanisms enabling collaboration emerge not only from internal needs for resources but also from external stimulation for collaborative behaviors. Particularly in a highly fragmented political structure such as the US local governance system, policy objectives at the metropolitan level, such as those concerning economic development, can easily become pointless without the credible commitment of decision-making units within a region. Hierarchical coordination of local behaviors can be an effective mode of governance at the metropolitan level. It does not have to be regarded as a turning-back to the bureaucratic model. Instead, we can see this mode of governance facilitate deliberate joint action for collective benefit. Empirical comparative analysis will show how much this mode of governance influence on inter-organizational collaboration and evaluates its effectiveness compared to other modes of governance.

## **1.1 PROBLEM STATEMENT**

### ***1.1.1 Searching for ‘Good Governance’***

In the new era of public management, it is often said that governance replaces government. Collaborative relationships through horizontal networks have emerged as an alternative to the hierarchical bureaucratic system. This fundamental transformation in the governing mechanism seems inevitable in the light of the fast changing and extremely complex environment. It is also true however that the traditional values of stability, accountability, equality and predictability of public services have been replaced by others such as efficiency, economy, and effectiveness. As

the new public management (NPM) movement emphasizes the importance of these values by creating the decentralized, networked, and horizontal governance mechanism, concern about the decreasing focus on the above-mentioned traditional values is increasing.

However, concerns about the recent public management movement do not necessarily mean that the old system of bureaucracy should be kept at any costs. Rather, it implies that, as the collaborative approach to social problems is getting more popular, it should be more thoroughly analyzed and carefully pursued. At the heart of this intellectual process is a systemic understanding of governance structures. In this respect, this study becomes a part of the never-ending search for a system of 'Good Governance.' As Thompson & Perry (2006) maintain, systematic knowledge on governance is critical in probing the issue of collaboration because, to a considerable extent, governance defines both the content and the scope of collaborative activities. Thus without a comprehensive understanding of governance, any attempts to describe, explain and predict collaboration become pointless. Governance studies should provide theories with which empirical analysis on collaboration can be conducted, and set the conceptual boundaries beyond which studies on collaboration may go completely astray.

At present, the problem is no universal model of governance exists yet. Given the interdisciplinary nature of the field, systemization of knowledge on the issue of governance needs extreme endurance for noises for a while.

With this study, I do not aim to contribute to this complexity. Instead, I intend first to aggregate significant theoretical backgrounds of governance, and then develop an integrative model of governance by incorporating various governance-related theories in an appropriate manner. The search for a model of good governance is fruitless unless it is supported by accurate theoretical guidelines. Empirical evaluations of effectiveness of governance structures can be derived from theoretical speculation. Without articulation of governance studies, empirical analyses either become astray or mistakenly practiced in the field of policy studies.



### ***1.1.2 Why Collaboration?***

Collaboration matters.<sup>1</sup> Particularly in competition for scarce resources, collaboration may be the best strategy to produce high rate of cost-effectiveness from the economy of scale. This strategy is attractive to local governments, which most often operate with limited power and resources. Hence there is no logical obstacle keeping local governments from participating in collaborative activities.

But history tells us that collaboration is more of an exception than the rule. More often witnessed is the heavy competition between cities, most of which is spurred by jurisdiction-centered interests. In this context, the collaborative strategy suddenly becomes less favorable because every government has to consider the possibility of being defected by its neighbors. This phenomenon may be best described as a zero-sum game, in which each government is helplessly forced to compete for their own survival. This results in a situation where only a small number of winners gain much of the resources at the cost of the others.

Even though the latter statement depicts metropolitan regions as a brutal field full of competition and conflicts, some regions have still successfully built a collaborative culture in which their constituents are pursuing shared objectives in harmony. This observation has challenged the traditional collective action theories. Both academics and practitioners, in this regard, need to discover the factors facilitating collective actions or collaboration. Institutional theories, which have gained popularity in various disciplines of social sciences, are expected to provide strategies to overcome the problems associated with collective action problems. However, no matter what explanations institutional theories generate on successful collective actions, doubts still remain, and one might ask, ‘What institution?’ This study believes that one possible answer resides in the governance structure, which refers to the organizing principles of the public sector (Hamilton et al, 2004).

---

<sup>1</sup> Collaboration is a concept that describes the process of facilitating and operating multi-organizational arrangements for solving problems that cannot be achieved, or achieved easily, by single organizations (McGuire, 2000:278).

### ***1.1.3 Governance and Collaboration***

Built upon this theoretical speculation, this research attempts to identify the relationship between governance structure and the pattern of collaboration. An effective collaborative strategy cannot emerge without a clear understanding of intergovernmental institutional structures. This study begins by introducing an institutional framework in which political dynamics that create collaborative activities are more clearly delineated.

Specifically, two metropolitan regions, Minneapolis in Minnesota and Pittsburgh in Pennsylvania, provide cases which best fit into this framework. Methodologically, demographic and statistical similarities between the two regions qualify the adoption of the most similar research design. This research design goes along with the institutional framework as well. Many structural differences embedded in the two metropolitan regions can be controlled at the conceptual level, which makes it easier to determine the causal linkage between governance structures and the patterns of collaboration in these two regions.

Theoretical speculation identifies four different modes of governance. Two major perspectives on governance, the structural and the procedural perspective, are used for delineating the distinctiveness of each mode. In this study, modes of governance are understood as institutional structures that formulate and circumscribe the collaborative activities between local governments.

Among the four modes of governance, only two are practically useful when they are actually applied in the field. Those are the modes of Cooperation and Coordination, each of which is found in the Pittsburgh and Minneapolis regions. By comparing the modes of governance of these two regions, this study claims that hierarchical policy coordination in the Minneapolis region has created a strong incentive for local governments to develop a concept of regional identity, upon which cooperative relationships are founded. This pattern of relationships is believed to play a positive role in increasing policy effectiveness and, at the same time, in controlling fiscal disparity.

To examine these hypotheses, this study conducts an empirical analysis of why the collaborative culture is maintained in one region and not in the other. A key institutional infrastructure for successful collaboration is the existence of a regionalized political process in which the dynamics of vertical and horizontal relations are creatively balanced. This implies that

a collaborative turn in the discipline of public administration should not be understood as a discontinuation of old experiences. We cannot discredit the bureaucratic hierarchical system without further consideration of its applicability. When this traditional idea of governance can be creatively incorporated to the polycentric structure of a metropolitan region, we may expect to successfully escape the notorious dilemma of administrative efficiency and political inequity.

A unique empirical contribution of this study comes from the tests of multiple hypotheses concerned with the relationship between the likelihood and extent of collaboration and governance structures. These hypotheses were developed based on the idea that cultural as well as political integration at regional level tends to increase the level of collaboration. This idea is against the well-known proposition that a hierarchy impedes horizontal cooperation. This study also shows significant progress from existing references of collaboration studies in that this study successfully overcomes the structural deterministic explanation of collaboration. While variances in the level of collaboration used to be explained by level of structural fragmentation, in the new conceptual framework, collaboration is understood not only as an accommodation of fragmented interests, but a deliberate cultural integration of political identity. By this mechanism collaboration can engender structurally stable and functionally efficient social outcomes.

## **1.2 OBJECTIVES OF THE STUDY**

This dissertation is intended to advance our understanding of local and regional governance in six ways.

First, it extends the existing knowledge of local governance and economic development by incorporating sophisticated collective action theories. Given the assumption that the rational actors are unlikely to cooperate and defect others in order to pursue their self-interests, autonomous local governments are expected to pursue their self-interests at the costs of others. This is why practitioners in the field of local governance are eager to build institutions that prevent the mutually destructive zero sum game. However, as stated, it is clear that some metropolitan regions have performed better than others in terms of economic growth. How have they been able to overcome the inherent collective action problem while others have failed?

What has contributed to their unusual success? This dissertation reasons that the governance mode at the regional or metropolitan level may account for the observed divergences in the collaborative activities at the intergovernmental level.

The second objective is to provide a useful theoretical framework to evaluate different modes of governance systematically. With the help of the new theories of institutionalism, this dissertation introduces a unified framework of regional governance which integrates structural and procedural perspectives. Empirical analyses were performed to test the validity, applicability, and generalizability of this framework.

The third objective is to reevaluate the managerial advantages of the hierarchical system in the field of local governance. This dissertation challenges the strong belief in the efficiency of the decentralized decision-making process and fragmented structure. Efficiency gains of decentralization should not be presumed but rather be strategically pursued in a variety of contexts. It is more a subject of empirical research. While still counting efficiency gains as significant, this research claims that a hierarchical coordination of a fragmented local governance system is considerably effective. At the same time, this study disregards the theoretical effectiveness of the unidimensional dichotomy of centralization and decentralization, and instead introduces a practical alternative by which theoretical weaknesses of structural perspective on governance are effectively managed.

The fourth objective of this study is to explore the relationship between modes of governance and the pattern of economic development policy activities. Influenced by recent works on network and social capital, this study agrees with the argument that a region's competitive advantage lies in reciprocal collaboration among actors, organization, and governmental units within society. What distinguishes this study is a search for an explanation why reciprocal collaboration is maintained by a particular political process in some regions yet not in others.

Closely related to the fourth objective, the fifth is to provide empirical evidence supporting the significance of modal approach to regional governance by explaining the differences in the extent and patterns of inter-organizational collaboration between two regions. It is expected that the hierarchically integrated region will be more active in horizontally cooperation, which in turn works to strengthen the perception of collective identity and regional interests.

The final objective is to build practical stereotypes of regional governance. Once properly recognized, these models of metropolitan governance will enable future studies to categorize metropolitan regions more easily.

### **1.3 BEYOND STRUCTURAL DETERMINISM IN REGIONAL GOVERNANCE STUDIES**

The mode of structural explanation is the most frequently adopted strategy in research on social relationships. The virtues of clarity inherent in structuralism provide methodological simplicity to field researchers. Knowledge accumulation on regional governance and inter-organizational collaboration owes a lot to this research tradition.

However, structuralism as a research ideology has been increasingly challenged for several reasons. The one major weakness embedded in structural perspective is that it cannot account for the interactive dynamics of social structures and the political process. In addition, with an emergence of the methodologically-specified and empirically-oriented studies in social science in general, explorations of the interactive effects of various social factors have been ignored.

The fields of governance and collaboration studies are not an exception. Only Stone (1989) and other regime theorists found this problem irritating,<sup>2</sup> while a majority of schools such as Institutional Collective Action (ICA) and Collaborative Public Management (CPM) do not address the interactive effects of structures and political processes on municipal decisions on collaboration. The latter two schools explain patterns of inter-organizational collaboration as rational calculation of transaction cost determined by institutional rules, or as a strategically selected course of action with vertical and horizontal partners in complex environments, respectively.

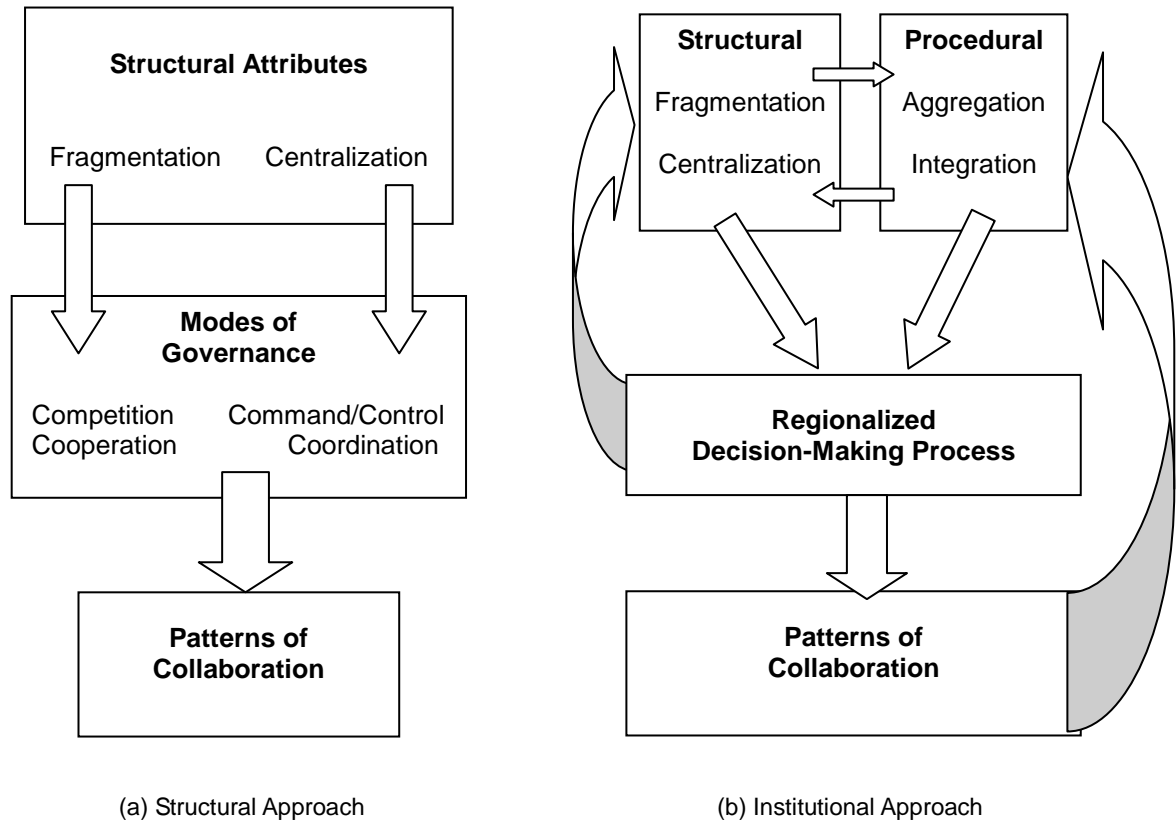
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<sup>2</sup> Scholars make sense out of the particulars of political and social life by thinking mainly in terms of abstract structures... Although these are useful as shorthand, the danger in abstractions is that they never capture the full complexity and contingency of the world... But students of history see a world undergoing change, in which various actors struggle over what the terms of that change will be (Stone, 1989: 9-10).

<Figure 1-1> provides a simplified version of the dominant perspective in regional governance and collaboration studies. According to (a) structural approach, the level of fragmentation at the regional level determines the governance mechanism to a great extent, so the patterns of inter-organizational collaboration are easy to predict in isolation from other social contexts. The ground-breaking study of Tiebout (1956) represents this perspective, in that his explanation of the effectiveness of his voting by feet sorting system is entirely dependent on the structural fragmentation of local governance system. At the same time the Progressive movement advancing regional consolidation falls under this approach as well because its argument is built on a strong belief in the efficiency of a structural solution to policy problems.

The schools of ICA and CPM present perspectives too developed and sophisticated to be included as part of the structural approach along with Tiebout and Progressive movement. In fact, they clearly acknowledge the significance of relational perspective in explicating inter-local cooperation, and each theory proposes excellent theoretical models of governance and collaboration. They make use of various institutional factors, including forms of government and policy networks as explanatory variables. However, they do not address the complex mechanisms by which those factors are interrelated and produce collective results.

Institutional approach (b) in <Figure 1-1> suggests an alternative conceptual framework for studies on regional governance. First, it recognizes the interactive effects between structural and procedural factors in regional decision-making. Second, it gives considerable attention to collective problem solving, which is described as a regionalized decision-making process (Lewis, 1996). This political process is structured by inter-organizational dynamics, and at the same time confines the scope of structural and procedural attributes of regional governance in return. Patterns of collaboration are always vulnerable to changes of any kind, so they cannot be fully comprehended as pre-determined behavioral routines by any means.



**Figure 1-1. Explanatory Models of Regional Governance and Inter-Organizational Collaboration**

But the problem inherent in the institutional framework is its applicability to empirical analyses. Requirements this framework asks for are extremely hard to follow. Given the constraints of limited resources and a lack of relevant data, this dissertation employs cross-sectional analysis rather than an in-depth longitudinal case study. Absence of any time-series explanation of the pattern of collaboration is, therefore, a major weakness of this dissertation. However, it will contribute to the field of regional governance and collaboration studies by introducing a set of procedural variables and categorizing regionalized policy process with an integrative framework of governance.

## **1.4 ORGANIZATION OF THE STUDY**

This dissertation consists of seven chapters. Chapter 1 describes the problem statement of this study. It outlines the problem, the significance of the study, and last but not least, how this study was conducted.

Chapter 2 starts with a summary of theoretical discussion on governance. The strengths and weaknesses of various theories will be carefully analyzed, and at the same time, an integrative framework and its background will be proposed. Since most current theoretical perspectives on governance are inherently uni-dimensional, their empirical applicability is fundamentally limited. The governance phenomena they are supposed to analyze are too complicated for the theories to handle. To remedy this incompatibility between theory and reality, this dissertation builds a more comprehensive framework, integrating structural and procedural perspectives on governance.

Chapter 3 presents issues related to research methodology. Knowledge gaps existing in collaborative studies and this study's empirical contributions will be fully discussed. The methodological advantage of comparative case study will be briefly mentioned, and methodological issues such as operationalization, measurement, and variables are discussed.

Chapter 4 and 5 are devoted to empirical analysis of the major research question. Chapter 4 presents the research outcomes with respect to the determinants of inter-organizational collaboration in the two distinctive metropolitan regions examined.

Chapter 5 describes the differences in patterns of collaboration in those regions. While Chapter 4 exclusively focuses on the level or extent of collaboration of local municipalities in the two regions, Chapter 5 deals with the question of 'how' the inter-organizational relationships are differently structured according to type of actors and policy activities. Network measures such as actor and activity centrality help delineate the pattern of connections between local municipalities and other organizations and determine the central network partners and policy activities in local and regional economic development.

Moving from the microlevel perspectives presented in Chapters 4 and 5, Chapter 6 analyzes the situation using a more holistic approach. The metropolitan regions are defined as organic wholes where integration of local governments is maximized. In order to accurately describe the regional differences between Minneapolis and Pittsburgh, this chapter suggests a



cataloging approach to regional governance and presents endogenous differences as reflected in aggregate data collected from surveys.

Finally, Chapter 7 concludes and provides policy implications for future research, as well as presents limitations of the study.

## **2.0 THEORETICAL BACKGROUND**

This chapter presents the theoretical basis for this dissertation. First, it begins with a survey of the collective action problems literature. Since the main research subject of this study is the level and scope of collaborative policy activities among local municipalities, a systemic understanding of the strategic choice of collaboration is a crucial prerequisite. Collective action studies look into why collaboration is difficult to achieve and how collective action problems could be overcome.

The second part of this chapter describes the theoretical debate about governance, regional governance in particular. Governance studies have allowed for significant theoretical advancement in the field of public administration by addressing the issue of collaboration. While it looks as if the emergence of governance is an irreversible phenomenon, our understanding of governance is still very limited both in theory and practice. A new and integrative perspective on governance is developed, based on the institutional approach to collective action problems.

### **2.1 COLLECTIVE ACTION, COLLABORATION AND INSTITUTIONS**

#### ***2.1.1 Collective Action Problems and Metropolitan Regions***

The recent interest in collaborative policy activities in the field of public administration mirrors the increasing complexities of policy problems. Collaboration had become favorable for development-minded public officials because first, the developmental capacity of a given government is intrinsically limited regarding usable resources, second, these resources are usually widely scattered throughout society, and finally, the expected benefits from a collaborative strategy are much larger than those to be expected from independent development

policy efforts. As a result, in order to utilize resources located outside jurisdictional boundaries, public managers are apt to adopt collaborative policy strategies rather than stick to the authoritative command and control system.

However, the collaborative approach to economic development is not necessarily easy to apply. Collective action problems occur in situations where rational individual choice would not result in optimal collective benefit. Unless the number of individuals in a group is quite small, or unless there is coercion or some other special device to make individuals act in the common interest, *rational, self-interested individuals will not act to achieve their common or group interests* (Arrow, 1951; 2).

All the tragedy of the commons, the prisoner's dilemma, and the logic of collective action represent the same phenomenon that individuals should face when they pursue collective objectives. At the heart of each of these models lies the free-rider problem (Olson, 1965; Ostrom, 1990: 6), which is particularly pervasive when providing public goods is at issue. Since these goods are usually non-rivalrous and consumption of them is non-excludable, each individual possesses a strong incentive not to contribute his share of the production cost and instead to take a free ride on the effort of others (Olson, 1965). But, if all participants choose to free-ride, the collective or social benefit will not be ensured, since "individual rationality is not sufficient for group rationality, there is no reason to suppose that a group of individuals will act in their own interest" (Olson, 1992). As a result, the pursuit of self-interest by each individual leads to a poor outcome for all (Axelrod, 1984: 7).

Metropolitan governance, which consists of multiple autonomous local governments, has been regarded as an example of a collective action problem. Each government is not willing to give up its own interests and strives to pass any developmental costs on to other governments as much as possible. Adding to this, myopic elected officials tend to sacrifice long-term and time-consuming projects which could possibly generate bigger benefits in the future. Pejoratively speaking, metropolitan areas are full of governments, but nobody is responsible regionally. Accountability is scattered and decisions are made with little concern as to the impact of individual local governments' policies on regional issues. Everyone speaks out but nobody takes charge. It is this context in which the fundamental question is raised, 'Who Governs?' (Hall, 2004).

Three rival schools of thought exist with regards to the direction metropolitan governance reform should take in pursuit of collective and region-wide benefits. Although they resemble one another to a considerable extent, their solutions to the problem of public sector ineffectiveness are certainly distinguishable. In addition, several arguments from each perspective are worthy of more thorough scrutinization. The core ideas of iterated prisoners' dilemma, new institutionalism, and social capital theory will be addressed as important theoretical speculation on collective action problems.

### ***2.1.2 Collective Action without Central Authority 1: Iterated Prisoner's Dilemma***

The previous section summarized why collective action problems are the main obstacles for social benefits maximization. A simple question then arises: "Under what conditions will cooperation emerge in a world of egoists? (Axelrod, 1984: 7)."

The first solution is proposed in Axelrod's seminal study of the evolution of voluntary cooperation. By programming Prisoner's Dilemma game repeated indefinite times, he found out the best strategy for each actor who participates. This strategy, famous as Tit-for-tat, requires actors to begin with cooperation on the first move and then do whatever the other player did on the previous move. They reciprocate cooperation with cooperation, but reciprocate defection with defection. It sounds simple, but it turns out that this "tit-for tat" strategy prevails in the end for the collective perspective, because dysfunctional forms of competition are "selected out" and there is a greater likelihood that a symbiotic relationship will take hold among actors (LeRoux, 2006: 28). Under suitable conditions, cooperation based on this reciprocity can even develop between antagonists. Axelrod's main contribution is he found out that what makes it possible for cooperation to emerge is the fact that players might interact again (Wood, 2004: 89).

This argument is against the belief in a self-regulating capacity of the market system. According to Tiebout (1956)'s articulation of the quasi-public market system of local governance, if citizen's preferences with respect to local public services are not intervened, a market-like sorting system of 'voting by feet' will produce allocative efficiency so as to result in a Pareto optimum at the collective level. In this situation, there is no need for collaboration among local governments because every municipality is now better off. But, as noted above, an emergence of opportunistic behaviors in the process of joint production of public goods distorts

the preference sorting system, and as a consequence, Pareto efficiency can no longer take hold in local system. Again, at the heart of this sequence is the inevitable social phenomenon of collective action problems.

However, if actors in a political system acknowledge that the interaction with their partners will be reiterated, they are willing to change their strategy in order to minimize the probability of future retaliation. In this respect, with a redefined assumption on interaction, the structure of the Prisoner's Dilemma is transformed from Zero-Sum game to Positive sum game, and the possibility of mutual adjustment among actors is greatly increased.

For two decades this argument has been evaluated as a significant advancement in collective action theory. A number of studies have attempted to apply this model to the field of local governance (Feiock, 2004a). However, the results from empirical studies have not been consistent and sometimes even show evidence the opposite of theoretical expectations. Whereas it is apparent that the consideration of future interaction impedes local governments pursuing opportunistic strategies, it is doubtful that this is a major determinant of collaborative strategies. Regarding the empirical complexity, another school of thought argues that the environmental or contextual factors should be included in the collaboration function of local decision-makers. This scholarly group is known as 'new institutionalists.'

### ***2.1.3 Collective Action without Central Authority 2: New Institutionalism***

The key concept penetrating both the iterated Prisoner's dilemma and new institutionalism is the concept of 'choice.' Regardless of the assumptions of rationality,<sup>3</sup> both schools of thought

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<sup>3</sup> Like many social science languages, a concept of rationality does have multiple definitions. Economic definition of rationality usually refers to a choice among competing options which yields highest net benefit. It is particularly important for classical economists whose major concern is to find a social equilibrium at which countless individual rational choices are perfectly balanced. However, in the field of public administration, the purpose of action is not limited to benefit maximization. The other public values such as equity is as much important as economy or efficiency, this strictly defined concept of rationality is more of nonsense. Moreover, since it is well known that individuals make a choice not solely based on rational calculation but also on norms, rules, and other social values, adhering to the assumption of economic rationality produces more harms than good. Axelrod (1984) clearly acknowledges this limit, and writes that rationality does not have to be an assumption for his iterated Prisoner's Dilemma game. For institutionalists, particularly who work within a tradition of rational choice perspective, an assumption of rationality is still inevitable. However, their definition of rationality conceives of

interpret social phenomena as the intended results of strategic choices of individuals. To both schools, in this regard, building an optimized decision-making environment is the primary policy objective. One of the most important components in this environment is the accurate understanding of institutional infrastructures by which the repertoires of strategies are constrained. From this perspective it is natural to derive an argument that any reform proposals exclusively dependent on game theoretic prediction will be ineffective in practice and even harmful to the governing system as a whole. Overcoming collective action problems is a continuous search for better institutions, rather than a creating conceptual laboratory only in which cooperation is possible.

Institutionalists' interest in this regards centers on empirical exploration of collaboration-friendly environments. From numerous inductive studies, Ostrom and her colleagues found that under certain circumstances, rational individuals select collaborative strategies rather than a free ride at the expense of others. According to Ostrom (1990), the most effective alternative enabling collective action is the self-organization of individuals in the absence of a central authority. Although the process of self-organization in itself is exposed to possible collective action problems, certainly there are a lot of successes reported, which result in collective benefits as a whole.<sup>4</sup>

The mechanism of self-organization has been posed as an alternative to the market and the Leviathan models of collective action. Both market and state systems have critical flaws when they are applied to collective action situations for different reasons. As stated, the market may provide a field in which interactions occur, but at the same time it is the source of Prisoner's Dilemma, since the rule of free exchange in the market mechanism does not guarantee iterated interactions between actors. It encourages opportunistic behaviors so as to result in collective inefficiency. In the Leviathan model, a major weakness can be found in the distorted preference sorting mechanism. As Powell (1990) asserts, preferences in hierarchical structure are assumed to be dependent on principals' interests. There is no way in this context a social equilibrium is

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environmental constraints, so it may be better described as 'nested' definition of rationality.

<sup>4</sup> Ostrom developed eight design principles found in successful institutional arrangement. 1) clearly defined boundaries 2) congruence between appropriations and provision rules and local conditions 3) collective choice arrangement, for example democratic participation 4) monitoring 5) graduated sanctions 6) conflict resolution mechanisms 7) minimal recognition of rights to organize and 8) nested enterprise among larger groups. Each of these conditions needs further explanation, but it is not critical in my study to summarize all of Ostrom's ideas. For details, Ostrom (1990; 1994; 2004).

achieved because local preferences are easily disregarded by central interference. In short, an assumption of free expression of preference is not met in a pure Leviathan model.

Ostrom and her colleagues claim that, in the process of self-organization and self-governance, problems inherent in the market and the Leviathan model can be successfully resolved. Their framework envisions a system of governance in which collective action problems are overcome through voluntary adherence to a universally accepted rule structure and the use of sanctions against those who do not conform (LeRoux, 2006: 29). Since all collective actions are voluntary, no participant is likely to exploit others in the presence of the high possibility of future retaliation. At the same time, an absence of central authority enables the institutional infrastructures to reflect the true preferences of actors.

After one decade, Ostrom further refined her ideas by incorporating concepts of social capital and trust into her institutional framework. It is believed that the rationality assumption in her original idea had a critical weakness in explaining variances in the level of collaboration across hundreds and thousands of human societies. But the initial research strategy on institutional diversity remains untouched as “to identify those aspects of the physical, cultural, and institutional setting that are likely to affect the determination of who is to be involved in a situation, the actions they can take and the costs of those actions, the outcomes that can be achieved, how actions are linked to outcomes, what information is to be available, how much control individuals can exercise, and what payoffs are to be assigned to particular combinations of actions and outcomes (Ostrom, 1990: 55).

The basic idea of new institutionalism is that the individual behaviors and choices are essentially constrained by various kinds of institutions such as rules, norms, and standard procedures. Even though the difficulty in defining institutions is still pervasive, institutionalists believe that knowledge of social behaviors without clear comprehension of context is fundamentally flawed. Individual behaviors and interactions between the same individuals are necessarily ‘nested’ within institutional infrastructures (Tsebelis, 1990). From the institutional frameworks, choices are biased because institutions are created and maintained in order to protect the parochial interests that serve only a part of the society (Knight, 1992). In this context, even the rationally chosen strategies eventually become nested within institutional contexts, and

the concept of rationality should be described as ‘bounded.’<sup>5</sup> Furthermore, it may be possible to argue that understanding collective actions based on nested or bounded rationality is an understanding of institutions, which regulate social interactions among actors. Accordingly, in order to explain collective actions or collaborations, a clear comprehension of institutionalized relationships among social actors should be preceded.

#### ***2.1.4 Social Capital, Network, and Collective Action: A Relational Perspective***

It is noted that social actors do not always make a choice based on rational calculations. An assumption of perfect rationality has been criticized as unrealistic (Green & Sharpiro, 1994), and except for the cases of pure economic analyses, recent studies in social science in general rarely employ the strict version of rationality as a choice mechanism. Simultaneously, an increasing interdisciplinary approach to collective action provides opportunities for political scientists and public administration scholars to import other theoretical frameworks such as social capital theory or network analysis, which do not follow rational choice tradition. These new perspectives have gained scholarly attentions surprisingly fast, so that a large numbers of new studies can have been benefited from their creativeness.

Their main contribution comes from the theoretical attention to relationships. This is a new turn in social science in the sense that some social phenomena could be better explained by examining the interactions of multiple actors. Behavioral theories including methods exclusively dependent on the attributes of selected variables (Ragin, 1987) are unable to explain variances within a case. In contrast, relational approaches make explanation of these variances possible by allowing for manipulation of relational variables such as an intensity of relations or pattern of relationships (Powell, 1990: 301).

The second significant theoretical advancement of relational approaches is closely related to their interpretation of rationality. As stated above, if collective action is the sum of individual

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<sup>5</sup> It has to be mentioned that rationality does not mean the universality of a choice. Rational choices are inevitably ‘nested’ because they are rational ‘only’ in a given condition. The same choices would be not rational at another time or in another context. A famous debate on the ‘embeddedness’ of economic activities illustrates the wickedness of the concept of rational choice as well. For details, see Granovetter (1985).



strategic choices, rationality has to function at the assumption level, so as to make individual calculation of cost and benefit possible. In contrast, in the relational approaches, behavioral strategies could either be rationally chosen or imposed by other criteria such as norms, cultures, and social values.<sup>6</sup> Methodologically, whereas variables derived from individual attributes remain relatively stable, relational variables are constantly evolving so that the impacts of environmental factors can be accurately explained.

The emergence of networks in the field of public administration reflects the increasing dissatisfaction with existing governance systems, including both market and hierarchy systems (Fredrickson, 1999; O'Toole, 1997; Powell, 1990). The limitations of hierarchical systems in post-modern society are self-evident and have been constantly debated since the 1980s. The lack of confidence, inefficiency, and ineffectiveness in public service delivery of hierarchical systems is undeniable. However, turning in the opposite direction toward a market solution seems to have not been as successful as desired either. Bureaucratic resistance to structural reforms is still very strong, and lack of a performance measurement system brings into serious doubt evaluations of organizational effectiveness. At the center of all operational difficulties of reform endeavors, however, exists a misunderstanding of the market system.<sup>7</sup>

The market system operates under an assumption of anonymity. Actors do not imagine the possibility of future interactions with the same actors. Price is 'assumed' to give perfect information to every player in the market system. Competition is 'assumed' to produce allocative efficiency. However, as explained in the previous section, a market system operating exclusively based on price mechanism is unsuccessful at capturing the intricacies of idiosyncratic, complex,

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<sup>6</sup> This abandonment of the assumption of rationality is far from new, and has been constantly shown in literatures. One of the most referred critics to rationality stems from institutional approach, which is introduced by March & Olsen (1984, 1989). Quoting Simon's seminal concept of 'limited rationality,' they argued origins of social behaviors could be found in social norms and values, which have been 'institutionalized' for a long period of time. The social capital theory, one of the relational approached, is in this respect regarded as an institutional theory on collective actions.

<sup>7</sup> The network form of governance is regarded as one of the results of market-driven reforms in the field of public administration. Some scholars use these concepts interchangeably and do not address the differences embedded within them (Olsen, 2006). Their arguments could be justified because both approaches share a critical view of the bureaucratic system and serve the same objective of decentralized decision making and efficiency maximization. However, it should be noted that each approach is fundamentally different more than similar in terms of intellectual backgrounds, major assumptions, and other methodological issues such as units of analysis. While this dissertation will not delve into details of these differences, it clearly acknowledges that the market and network systems are destined to provide different contexts for collective actions.

and dynamic exchange (Powell, 1990: 302). In a world in which interdependency has become the status quo, information on the route of resources exchanges is as important as information on the volume of the exchanges. These routes or paths of resource exchange are usually called ‘ties’ between ‘nodes.’ (Granovetter, 1973; Burt, 1992).

Factors making these nodes collaborate with one another are not the demand and supply impulse but the strength of reciprocal norms and mutual trust. The connections make networks, and sustainable networks are expected to decrease transaction costs considerably. A network system is eclectic in that it is as flexible as a market system, while its internal relationships between actors are as durable as hierarchical organizations. Theoretically, the network form of governance system could contain the values of flexibility and stability at the same time.

Norms of reciprocity and mutual trust constitute the social capital theory. Putnam (1993)’s longitudinal analysis on regional economic development in Italy is often regarded as the cornerstone of social capital research tradition. He also advances the network perspective on collective action by actively adopting institutional paradigm. Unlike Ostrom(1990), and Powell (1990), he conceptualizes state and market as complementary in ‘civic’ settings (Putnam, 1993: 181). He posits that what makes collective action possible is not governance systems per se, such as market or hierarchy, but institutional junctures at which these systems and civic traditions are interwoven. Hence, collective actions are achieved only when policymakers are well aware of the civic background and norms of social life. According to Putnam, societies or regions which are well equipped with norms of reciprocity among social actors are more likely to overcome collective action problems and thrive collectively.

Now it is apparent that *social context and history profoundly condition the effectiveness of institutions* (Putnam, 1993: 182 italic in original). However, a comprehensive understanding of the importance of history and context is only the first step for building a model of ‘Good Governance.’

## **2.2 WHAT IS GOVERNANCE?**

### **2.2.1 *Defining Governance***

The most frequently used concept in public administration for the last two decades is ‘Governance’, but surprisingly, there is no established research tradition for governance studies yet, although some of academics have tried to build one of their own (Hill & Lynn, 2005: Ingram & Lynn, 1994: Lynn, Carolyn, Hill, 2000: 2001: Peters, 2001). Accordingly, conceptual and operational definitions of governance are as diverse as the research objectives of governance studies. For example, governance has been variously conceptualized as a political process in which a community identity and shared values are generated (March & Olsen, 1995), a collaborative process for building a harmonious partnership (Jacobs, 2000) or a high capacity to make, change, and enforce the rules within which provision and production of public services are created and modified (Parks & Oakerson, 2000). In contrast to this capacity-building, process-oriented definition, some scholars believe the essence of governance lies in its network-like relationship among actors across social sectors. Scholars such as O’Toole (1997) and Milward & Provan (2000) represent this perspective. They emphasize the effectiveness of a network structure in delivering public services in the context of “Hollow State.” According to them, governance is replacing government, which means that the formal institutions of the state and their monopoly of legitimate and coercive power (Milward & Provan, 2000: 239) are on the decline, and social resources of all kinds are becoming shared across social sectors. Studies on governance involve a constant search for a social structure that maximizes social benefits and empirical testing of its effectiveness in a variety of settings as well. Recent studies from both theoretical and empirical perspectives appear to agree that the network structure is the best structural alternative for governmental hierarchy in every aspect.

A more comprehensive definition of governance is given by Lynn et al (2000). From their perspective, governance refers to “regimes of laws, rules, judicial decisions, and administrative practices that constrain, prescribe, and enable the provision of publicly supported goods and services through formal and informal relationships with agents in the public and private sectors” (Lynn, Heinrich, & Hill, 2001: 7). They also clearly acknowledge the multiplicity of governance, by citing “two separate intellectual traditions have contributed to the

etymology of the term ‘governance’ (Milward, 1999: O’Toole, 1999).” The approaches of rule-bound institutional public choice and a networked social relationship constitute the field of governance study. Likewise, Peters (2001) proposes four models for governance: market government, participative government, flexible government, and deregulated government. Despite characterizing governance as a universal social transformation, he categorizes it by means of multiple dimensions such as policy problems, structure, management, and public interests. It is prescriptive because it requires that public officials act in a managerial capacity in areas such as problem identification and utilization of environmental resources. But no matter how this understanding is insightful, it unintentionally exacerbates the conceptual complexity inherent in the multiplicity of definitions of governance.

Given this lack of integrity in the research tradition, a common denominator of various governance studies might be the best resources for better understanding. It may help us to clarify conceptual definitions of governance and avoid committing mistakes in conducting empirical analysis. The very first step is to understand what has changed in the field of governance studies and in what direction this change is heading.

### ***2.2.2 Understanding Governance***

Very often it is said that governance is replacing government. It is not. What has changed is the configuration of relationships among various social organizations, particularly the relationships including governmental organizations. As briefly stated, a majority of scholars describe this change as the emergence of a networked society, in which public organizations share an equal part in a governance regime including private and non-profit organizations as well (Bardach, 1998: O’Toole, 1997: Agranoff & McGuire, 2003: Milward & Provan, 2000: Thurmaier & Wood, 2002).

Unlike the hierarchical relationship taken for granted as an organizing principle from the early to mid 20<sup>th</sup> century, no particular pattern of relationship is presumed a priori in the new governing regime. This is because as social diversity increases and policy problems get more complicated, the need for interdependence across sectors increases exponentially. These changes have justified structural rearrangement of governance system. However, haven’t we always turned to organizational restructuring whenever we encounter new problems? When society

faces difficulties in adjusting to changing environments, it cyclically changes to an alternative governing principle that is thought to better handle the vexing problems at present (Kauffman, 1956; Wise, 2002). And haven't we experienced that organizational reform is always accompanied by unintentional, unexpected, and severe problems? Here it should be noted that the structure-based understanding of governance is in itself very limited since it completely ignores the possibility of functional transformation of a given structure when it meets unprecedented and unexpected demands of society. Maybe what we need at this point is a more systematic understanding of the transformation of governance systems so as to untangle the complexities of policy problems at hand. The understanding of governance requires a creative framework in which the multi-dimensional aspect of governance can be described. The next section begins with critiques of existing models of governance and then sets a theoretical foundation for integrative modes of governance.

## **2.3 MULTIPLE PERSPECTIVES ON GOVERNANCE**

### ***2.3.1 Structural Perspective on Governance***

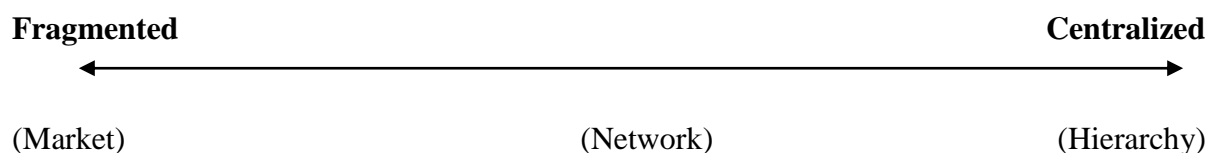
The tradition of behavioralism in the field of public administration has heavily relied on the characteristics of governing structures in explaining variances in individual or organizational behaviors. Structures, then, constitute the fundamental component of the governing system. They can be broadly defined as institutionalized rules or norms of social interactions. They become embedded in social systems in such a way that they shape the behaviors of actors by circumscribing options for choice. In this manner existing structures tend to be reinforced and solidified.

A countless number of empirical studies have attempted to measure the diversity of these structures in an effort to evaluate their influence on human behaviors and organizational effectiveness. Overall, degree of fragmentation of governance structure has been regarded as a significant factor in explaining such variances. Regarding to my theoretical as well as empirical subject, which is an explanation of variances of inter-organizational collaboration, the structural

perspective on governance would make an explanation far simpler. If there are institutional structures that regulate individuals to cooperate with pre-designated partners, collective actions should occur with a great certainty. But a more elementary question remains unanswered. How do we conceptualize structure? Is the definition of structure monolithic?

In order to avoid conceptual ambiguities, a clearer definition of governance structure is a necessity. Structure refers to the way in which parts are arranged or put together to form a whole. In social sciences, it is often defined as an organizing principle of society. We have conceptualized this principle dichotomously.

Definitions of the structural dichotomy of decentralization and centralization are relatively self-evident. But the criteria dividing the two opposing concepts are intrinsically complex as well. At least two perspectives on the structural fragmentation and centralization can be identified. One stresses the political level at which decisions are made, while the other is interested in the number of subunits comprising the whole. It is also related to the question of distribution of power and authority. In a fragmented system, actors are likely to have a broad range of autonomy in decision-making process, while in a centralized system local discretion is generally constrained in order for collective interests to be put forward.



### Figure 2-1. Structural Perspective on Governance

A centralized governance system, represented as a structural hierarchy in <Figure 2-1>, is assumed to have at least two functional advantages. The most significant argument can be found in the Weber's belief in rational bureaucracy. Since the birth of the discipline of public administration, the hierarchical form of bureaucracy has been regarded as the best organizational structure for governance as it holds public officials accountable while at the same time maximizing functional effectiveness. It works properly under conditions where the task

environment is known and unchanging, where it can be treated as a closed system (Chisholm, 1989: 10). Even when its rigidity to environmental changes and its inability to solve ‘wicked’ social problems are criticized by the public, this system has survived because of its strength in stability. The second structural advantage of a hierarchy comes from transaction cost economics. According to transaction cost economists, a hierarchy arises when the boundaries of an organization expand to internalize transactions and resource flows (Williamson, 1985). The strength of a hierarchical organization is its reliability –its capacity for producing large numbers of goods and services of a given quality repeatedly- and its accountability –its ability to document how resources have been used (Powell, 1990: 303).

When it comes to the issue of governance, hierarchy can be most efficient if it does not have to deal with massive transaction costs. In other words, as I will argue below, when individual benefits are highly compatible with collective interests, the hierarchical mode of governance does not incur any serious transaction cost problems at all.

The same logic can be applied to the fragmented mode of governance. In the context of structural fragmentation, there exist a number of independent actors, and so a number of individual interests. This structural arrangement represents the situation of a perfect market. No one relies on someone else for additional information because the market price carries all information needed for exchange. Furthermore, since individual behavior is not dictated by a supervising agent, no organ of systemwide regulation is necessary (Powell, 1990: 302). However, when transaction costs are taken into consideration in market interactions, in other words, when an assumption of the perfect market does not hold any more, information provided by price becomes tainted, and finally, interactions in the market system result in social inefficiency.

In sum, theoretically, hierarchy and fragmentation of governing structures engender different patterns of collaboration. At the extremes on the continuum introduced above, collaboration can be easily achieved regardless of whether there are opportunistic players or not. Self-interest (market) and strong chain of command (hierarchy) do not allow a situation that requires an actor’s commitment for future actions. If they worked as theory anticipates, both governance structures would optimize social efficiency in private (market) and public (hierarchy) sectors respectively.

However, real life does not function as theory might expect. There is neither a perfect market nor a seamless hierarchy. Every society is located between two extremes of market and bureaucracy. Particularly from a managerial viewpoint, the phenomenon of ‘blurring the boundary’ across social sectors necessitates an alternative organizational structure. In this sense, there is no longer a structural dichotomy, even at the conceptual level.

The more flexible, adaptable and horizontal structure of network has come to be of more interest to those who have adopted a relational perspective on collective action problems in the field of governance studies. In contrast to hierarchies, networks coordinate through less formal and more egalitarian and cooperative means (Thompson et al, 1993: 171). In a network structure, in contrast to the market structure, interactions tend to be sustained by ties linking participants. As O’Toole (1997) summarizes, the notion of a network excludes mere formal hierarchies and perfect markets, but it includes a very wide of range of structures in between. In networks, administrators cannot be expected to exercise decisive leverage by virtue of their formal position (O’Toole, 1997: 45).

The “wickedness” inherent in modern policy problems also poses challenges that cannot be handled by dividing them up into simple pieces in near isolation from each other (O’Toole, 1997: 46) as worked in the past. This near-decomposability of policy problems is the one of the major reasons the idea of a network is being treated more seriously.

Besides structural strength dealing with complex problems at hand, a network structure is thought to provide a competitive advantage in the context of ‘Hollow State.’ History shows that both public and private sector have developed specific organizing principles and operate under indigenous norms and rules of their own. However, there has been no serious attention paid to how to link these two sectors without a severe interference on each sector’s main principles. Past attempts to link the two are full of mistakes that committed by imprudent transplant of one sector’s rules to the other. Just as the application of top-down policy implementation such as “great society” programs generate enormous amounts of efficiency loss, a market-based approach to public policy has shaken public values such as accountability, equity, and representativeness. The network form of governance structure might be a good alternative to both the market and hierarchy structures. It should be noted, however, that the interest in network as a governance structure does not mean networks are being created to resolve dilemmas



embedded in inter-sectoral problems. The network approach still remains merely a theoretical lens through which the once invisible connections across sectors can be better described.

Furthermore, regardless of the rosy promises the network advocates offering, one cannot claim that network research successfully constitutes a coherent research tradition.<sup>8</sup> This dissertation strongly believes that the effectiveness of network as a governance structure cannot be appraised unless it takes the procedural perspective into consideration.

### ***2.3.2 Procedural Perspective on Governance***

The procedural perspective on governance is based on two distinctive types of political processes - aggregation and integration. Both of them are seen as social and political processes of collective decision-making or collaboration. When placed within the context of an American public ethos, collective decision-making or collaboration can be understood as a process that is founded in two competing political traditions: classical liberalism and civic republicanism. According to Thomson & Perry, classical liberalism views collaboration as a process that aggregates private preferences into collective choices through self-interested bargaining, while civic republicanism views collaboration as an integrative process that treats differences as the basis for deliberation in order to arrive at “mutual understanding, a collective will, trust and sympathy and the implementation of shared preferences” (Thomson & Perry, 2006: 20).

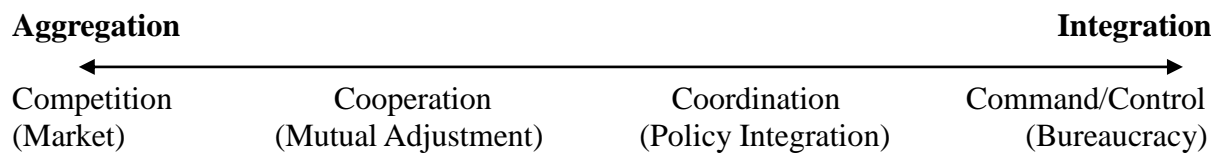
Their theoretical background can be traced back to the seminal work on institutionalism addressed by March & Olsen. Their definitions of modes of political processes are more sophisticated and specific in depth. For them, a mode of aggregation is a political process that allocates scarce resources in a way that is satisfactory, without eliminating the pluralism of interests and values. In this respect, political systems are similar to economic systems built around competitive markets and prices (March & Olsen, 1989: 119-120).

Understanding the integrative mode of political process requires understanding of the somewhat complicated theory of action. March & Olsen argue that, unlike with the aggregative mode, under certain circumstances local interests become integrated and a collective identity is

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<sup>8</sup> For example, Thompson (2003) claims that networks are both a conceptual category or tool of analysis *and* an object of analysis in the form of an actual mode of coordination and governance (Thompson, 2003: 6).

shared by members of a community. This process is encouraged by transformation of individual cognition of interests from self-centered to society-shared (Argyris & Schon, 1997: Powell & DiMaggio, 1991: Scott, 1995). Integration of various interests has become particularly important in light of recent governance experiences in which multiples actors from diverse social sectors coexist and interact, while each actor still carries out its sector-specific rationale of action.



**Figure 2-2. Procedural Perspective on Governance**

Hidden in this continuum of <Figure 2.2> is the dilemma of dual identity. Every individual in society has a dual identity which often creates an intrinsic tension between self-interest and a collective interest. Thomson & Perry (2006) quotes Huxham (1996), who refers to this tension as the autonomy-accountability dilemma. When individual interest is identical to collective interest, there is no need for a social mechanism by which the tension can be resolved. But reality does not allow for this ideal social equilibrium. But we still need this idealized social system for the sake of theoretical and empirical purposes, so that we can develop more practical kinds of political mechanisms.

<Figure 2.2> provides four different types of mechanisms, two of which stand for theoretical ideals of governance systems. The first mode of governance, competition, can be easily found in economics textbooks. The social process of interaction in this mode is briefly introduced in the section above that deals with issues of collective action. Market theory, present in the mode of aggregation, predicts that social interactions are not repeated, and the sole cause of these interactions is the pursuit of self-interest maximization. Resources are best used by those who value those most, so the rate of return for these resources will be maximized. While far from what is intended, the aggregate results of countless instances of competition over resources produce a socially optimized outcome. This is known as Pareto-Optimum. Although it sounds quite appealing, it is also well-known that the competitive strategy is fundamentally limited

when it is applied to reality. The perfect market based on perfect information is no more than an ideological myth. Especially in the public sector, full of public goods and services, the mode of competition is hardly visible.

At the opposite extreme, we can see the governing process of command and control. Actors in this system are not allowed to pursue their own interests. Individual interests are perfectly integrated into the collective or group interest, so that individuals function only as a functional unit in the whole system. Scholarly efforts to find the perfect span of control at the dawn of public administration represent the core idea of this mode of governance.

The remaining two modes of governance are worth a more detailed explanation. In <Figure 2.2> the major determinant distinguishing the cooperative mode of governance from the mode of coordination is the logic of action and the intensity of collective identity. In cooperation, the primary motivation of actions is a perception of self-interest and rational calculation of cost and benefits. But unlike the endless competition for resources assumed in the competition mode, actors in the cooperative mode start to feel the need for collective action to realize collective benefits.<sup>9</sup> This description resembles the society that Lindblom calls 'Pluralism.' Although self-interests and individual identities are as diverse as in the mode of competition, this mode is much more developed in that the inherent problems of collective action are now recognized and its solutions are creatively addressed. The concept of transaction cost is introduced, and the function of collective actions is differently defined. The cooperative mode of governance is the process of transforming diverse volitions into a collective choice. The common strategy observed in this tradition would be mutual adjustment. It embraces all forms of highly multilateral exercises of influence and power, including, but by no means limited to, bargaining (Lindblom, 1993: 240). It is a give-and-take system, but the results do not have to be optimized. Individuals start to have dual identity –individual and collective. Interests are balanced by the aggregative mode, but its process now occurs outside economic realm. In short, in the mode of cooperation, self-interest maximization remains the first and foremost goal, while the strategy to achieve it is fundamentally changed. The process of cooperation does not maximize allocative efficiency, but it can achieve a high level of efficiency by minimizing transaction costs to a considerable extent.

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<sup>9</sup> Multiple reasons such as transaction cost and 'the shadow of the future' can explain the modal transition from competition to cooperation.

The final mode is called the coordinated mode of governance. As assumed in the mode of cooperation, achieving interest maximization is still a valid objective of independent actors. But unlike in the cooperative mode, interests are accommodated via an integrative social process. The vocabulary of coordination is selected to reflect the fact that in this mode of governance, individual interests could be influenced by a third party enforcer who is not a direct participant in interactions. This enforcer does not have to be a human or organizational agent. It would be more accurate to define it as social institutions such as social norms, rules or standard procedures, all of which provide criteria for appropriate social interactions.<sup>10</sup> Accordingly, society as a whole is able to have its own interests, which are fundamentally different from the sum of the individual interests. Occasionally these two kinds of interests generate conflicts which necessitate an individual's sacrifice for others' benefit. The mode of coordination is thus a social mechanism through which two conflicting interests are accommodated and temporarily resolved.

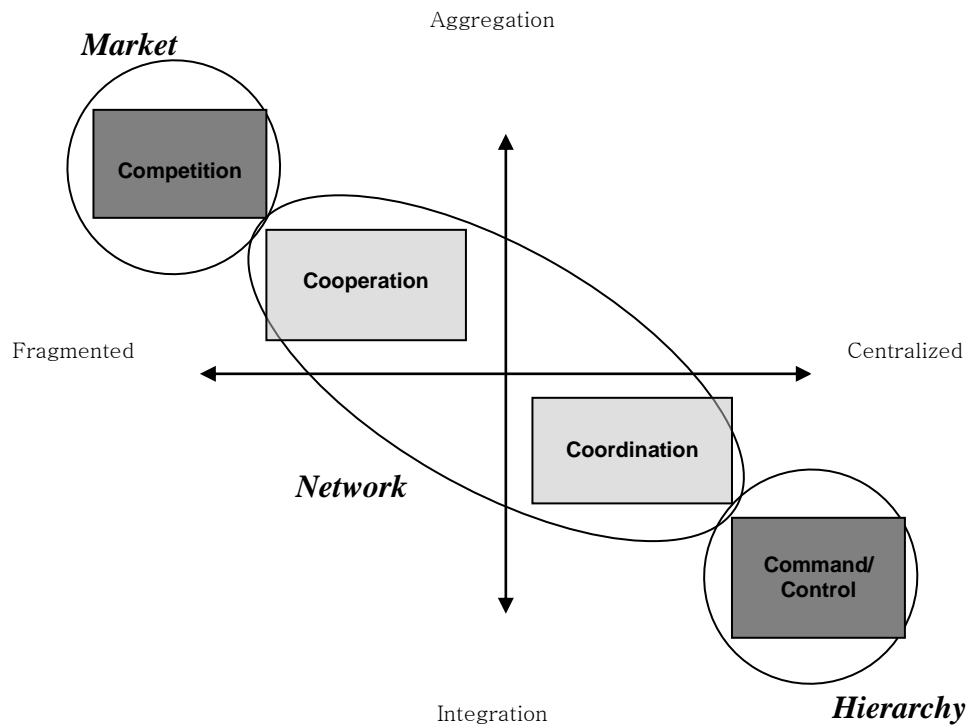
Undoubtedly, the four modes of governance have their own advantages and weaknesses. But looking at <Figure 2.2>, we are not able to explain why one society has developed one mode of governance while other society displays others. For instance, one may ask why one society can successfully launch privatization of public services while another cannot. The possible answer lies in <Figure 2.3>, the integrative framework of governance.

## **2.4 THE INTEGRATIVE FRAMEWORK OF GOVERNANCE**

Although the previous discussion about the modes of governance helps clarify the conceptual ambiguities inherent in governance studies, it only presents a partial picture. This section provides an integrative framework of modes of governance, in which a combination of the structural and procedural dimensions of governance provides a systemic categorization of governance systems.

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<sup>10</sup> According to March & Olsen, politics are organized by either logic of consequentiality or logic of appropriateness. In logic of consequentiality, behaviors are driven by preferences and expectations about consequences. In logic of appropriateness, on the other hand, actions stem from a conception of necessity rather than preference (March & Olsen, 1989: 160-161).



**Figure 2-3. Modes of Governance: Integrative Framework**

<Figure 2.3> summarizes how governance systems have been figured in accordance with interaction of structures and political processes. Multiple modes of governance are defined and put into place in two-dimensional space.

Unlike the uni-dimensional frameworks depicted in <Figure 2.1> and <Figure 2.2>, the framework in <Figure 2.3> makes it possible to read the dynamics that diverse social attributes jointly produce. Each of the four boxes indicates a particular mode of governance, which is institutionally circumscribed by structural and procedural attributes of social systems.

It can easily be predicted from this framework that actors in a structurally centralized society are likely to follow the norms of command and control or coordination. Conversely, it is clear that where decision-making authorities are widely dispersed, autonomous actors will tend to maximize their self-interests using the strategies of competition or cooperation.

### ***2.4.1 The Four Cs: Modes of Governance and Collaboration***

From <Figure 2.3> we can see that there is no articulated governance mode in either the Aggregation-Centralized (A-C) or Integration-Decentralized quadrants (I-D).<sup>11</sup> This confines the scope of our focus to the remaining two quadrants: Aggregation-Decentralized (A-D) and Integration-Centralized (I-C).

The contents of each mode of governance were briefly described in the last section. However, the earlier discussion was only a simple, single-dimensional, and deterministic conceptualization of how collective actions are achieved. It did not demonstrate how we can correctly distinguish between modes of governance. In order for the modal approach to governance to gain credence at least three questions need to be appropriately answered.

First, what determines a particular mode of governance? Second, is there any relationship between modes of governance and level of collaboration? And last but not least, does each mode of governance lead to development of a particular pattern of collaboration?

When studying governance, the importance of collaboration should be properly addressed as can distinguish modes of governance by careful observation of collaborative activities between individual actors. If we are interested only in policy decision-making in the closed system, a multiple-dimensional governance framework is not necessary. But in a situation where uncontrollable complexities emerge around policy problems and local actors are not capable of dealing with these kinds of problems any more, collective policy activities are called upon more frequently. Unfortunately these policy activities, in other words collaboration, can neither be described nor explained by the old framework of governance. This is why I have developed an integrative or more systematic framework of governance in which collaboration can be appropriately understood. This integrative framework can provide an accurate picture not only of governance mechanisms but also of plausible causal relationships between modes of governance and collaborative policy activities.

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<sup>11</sup> We may put social capital and deliberate democracy theory in the dimension of A-D. Both theories base their theoretical background on communicative rationality (Habermas) philosophically, and put an emphasis on trust between social actors. However, their usefulness in practice seems to be quite limited because they do not yet provide an answer to 'How.' Regarding the A-C dimension, the model of corporatism looks to fit, but its generalizability is highly questionable given the fact this model has developed only within a specific Scandinavian cultural context.

In the following subsections, the four modes of governance are reintroduced in a more systemic manner, and the relationships between each governance mode and collaboration will be illustrated as well.

#### *2.4.1.1 Competition*

While a pure form of competitive mode of governance does not exist in reality, this form has value in that it acts as a theoretical ideal to which the reality can be compared. As displayed in <Figure 2.4>, the mode of competition can exist only in the context of an absolutely decentralized governance structure. No asymmetry of power and resource distribution is allowed, and perfect decision-making authority should be secured at the hand of individuals. Competition is possible only in the context of egalitarian resource endowment.

The procedural assumption of competition is as unreal as the structural one. As Olson (1965) shows, the collective result of competition is not social equilibrium, but a society full of collective action problems. Structural decentralization secures free expression of preferences and unilateral pursuit of self-interests. But ironically, a combination of the two dimensions drives us to be wary of future that would be created in an environment of pure competition.

Collaboration in a competitive mode of governance is identical with exchange of goods and services. All exchanges are basically random, and participants in the exchanges do not need to be aware of whom they are interacting with. The relationship among actors terminates when the exchange is completed. Both anonymity of identity and randomness of interactions seem to be necessary on the one hand, but it does impede the establishment of long-term and reciprocal relationships. As societies are now recognizing the negative situations that unregulated competition can lead to, the value of enduring relationships is becoming more appreciated.

#### *2.4.1.2 Command and Control*

As in the case of competition, the mode of command and control is an idealized concept against which real governance systems are compared. It is located at the right end of the diagonal in <Figure 2.4>. The graphical description shows that the governance mode of command and control is highly expected when the two conditions of structural hierarchy and integrative interest accommodation are met. Structurally, this mode requires the a hierarchical design of authority structure and highly specified task of tightly coupled system (Comfort, 1999: 24). Procedurally, a

more culturally and politically integrated society is prone to the social interaction based on authoritative command and tight control. A combination of these two conditions would lead to an emergence of the mode of command and control.

Issues of collaboration in this governance mode have rarely been addressed for a number of reasons. First, in a hierarchically organized society, following rules and standard procedures is coerced by legal instruments. There is no doubt that in this unified structure, any attempt to pursue self-interest would be harshly punished.

The horizontal collaboration is not expected in different perspective. According to Simon, social systems are nearly decomposable, in which interactions among the subsystems are weak (Simon, 1996: 197). From his interest in dealing with complexity, hierarchy has a prominent value in the strength in controlling ‘inner environment’ of the whole system. The design technique is to discover viable ways of decomposing it into semi-independent components corresponding to its many functional parts (Simon, 1996: 128). The effectiveness of a whole system, then, depends on how well the independent parts perform their pre-designated functions. In terms of initial design, there is little reason for each subunit to collaborate with others who specialize in unrelated functions. From this argument we may not expect to observe collaboration in a mode of command and control system.

#### *2.4.1.3 Cooperation*

In a neoclassical market system, individuals make welfare-maximizing choices. The aggregated outcome of numerous choices is Pareto-optimum, in which preferences of independent actors are perfectly balanced. But the four major assumptions of this system - no externalities, no scale economic, no decision costs, and fixed preferences - produce widespread recognition of the need for the alternative modes of governance (Alt, Levi, & Ostrom, 1999).

One structural alternative, which can be defined as network has gained considerable attention from both academics and professionals. A network has been defined as “any collection of actors that pursue repeated, enduring exchange relations with one another and, at the same time, lack a legitimate organizational authority to arbitrate and resolve disputes that may arise during the exchange” (Podolny & Page, 1998: 59). This kind of structure is distinguished from a intra-organizational networks, which subsume relations between and among actors under a



governance structure that handles conflict resolution and channels behaviors (Fountain, 2001: 65).

A more serious concern with respect to networks comes from the procedural perspective. For example, while a network structure functions to provide a path for communication and resources exchange, there is no agreement on how to manage it or on who is responsible for the outcomes. Since there is no overarching rule to regulate network participants, the system as a whole is always exposed to the shirking behaviors of network participants. Individuals are likely to join a network when benefits from the network exceed the costs of participation. In other words, collaboration is an interest maximization strategy lacking the structurally enforced compliance of hierarchical structures. Collaborative outcomes through a network system are understood as an aggregation of exchanges. This aggregating process can be seen as “converting individual wants and resources into collective action by discovering and implementing policy coalitions that arrange Pareto-improving exchanges among citizens (March & Olsen, 1995: 12).”

As this type of mode does exist in reality, empirical inquiry on collaboration under a mode of cooperation is as important as theoretical inquiry. Explaining variances in the intensity and pattern of collaboration across societies can have both empirical and prescriptive values in governance studies.

The structural explanation of collaboration predicts that the more decentralized a system is, the less collaborative actors will be. This hypothesis will be tested in chapter four by comparing the two metropolitan regions of Minneapolis and Pittsburgh. At the same time, the procedural mode of governance will be measured and the combined effects of structure and procedure will be examined as well.

#### *2.4.1.4 Coordination*

The final mode of governance is relatively not well-acknowledged in governance studies compared to the others, but it has recently gained increasing attention. Like the cooperative mode explained above, strict and unrealistic assumptions are somewhat loosened here as well. The coordination mode, however, is distinguished from the cooperative mode of governance in that the roles of institutional rules are differently interpreted.

In an aggregated mode of interest accommodation as exists in the cooperative mode, institutional rules are one of the factors that influence rational calculation of actors. They are

intentionally designed to address a particular interest in a society so that their distributional effects are far from social justice (Knight, 1992). However, only if the distributional gaps are fully compensated can the society as a whole remain stable. In other words, where interests are accommodated in the aggregative mode, social stability cannot be assured.

The issue of resolving conflicts of interest is also differently addressed here. In the integrative dimension in <Figure 2.3>, conflicts are possibly resolved because actors are concerned not only with their self-interest but also with the common good of the community. Governance in this mode of conflict resolution involves creating capable political actors who understand how political institutions work and are able to deal with them effectively. It is about building and supporting cultures of rights and rules that make agreement possible. It also involves building and supporting identities, preferences, and resources that make a polity possible (March & Olsen, 1995: 28). Proper citizens are assumed to act in ways consistent with common purposes that are not reducible to the aggregation of their separate self-interest (Spragens, 1990).

Where this mode is different from the mode of cooperation is that the behaviors of actors are better depicted as rule-following. This does not necessarily mean that there is no self-interest. Actors are still eager to pursue their own interests whenever it is possible. But when an actor faces the moment of choosing between collective and individual identity, from the perspective of coordination, he is expected to pick the collective one. It is worth repeating that in the context where a decision-making authority is located above the individual level, actors tend to follow group identity and show a high level of compliance to collective objectives.

This type of interest accommodation process has been defined as the integrative mode of governance. And we already argued that the emergence of this mode could be greatly facilitated when an appropriate form of governance structure supports it. The structural condition of the mode of coordination is a network arrangement where actors are unduly connected to one another without central authority. As stated in section 2.3.1, the main advantage of a network structure over a market structure is structural endurance, as its flexibility is evaluated as the strength over hierarchy. Whereas interactions in market systems are random and short-lived, interactions between network participants are often enduring as well as reciprocal. Whether intentional or not, repeated patterns of interactions occasionally become norms or standard procedures that regulate future interactions. Likewise, as a network is not as structurally

integrated as a hierarchy, the absence of a perfect control system in a network system enables interactions to become gradually embedded in institutional environments (Granovetter, 1985). While the mode of cooperative governance depends on a purely calculative explanation of network formation and collaborative activities by network participants, collaboration is accounted for as an embedded economic and political activity in the ongoing structure of social relationships (Fountain, 2001: 69).

As can be seen, each mode of governance has its own strengths and weaknesses. But as concepts, these modes are rarely useful unless their applicability is assessed by empirical analyses. The next section will deal with the practical value of modal approaches to governance and how an integrative framework can help us understand the dynamics between real actors.

## **2.5 GOVERNANCE AT WORK: REGIONAL GOVERNANCE**

Until now we have discussed about how differently arranged structures and culturally embedded collective decision-making processes result in variances in the modes of governance and how collaborative activities are distinctively characterized in each mode of governance.

This section provides empirical cases to which the theoretical framework of governance is applied. The political arena of U.S. metropolitan regions serve well as empirical cases because, first, they consist of hundreds of self-interest oriented local governments, and second, each region differs in terms of governance structure and political process. This study aims to harness the inherent complexities of a metropolis and theoretically categorize them within the integrative framework of governance.

### ***2.5.1 Logics of Regional Governance***

The historical transformation of metropolitan or regional governance can best be described as a series of attempts to deal with<sup>7</sup> harmful collective action problems (Brenner, 2002: Feiock, 2004, 2004: Frisken & Norris, 2001: Harrigan & Vogel, 2001: LeLand & Thurmaier, 2004, 2005: Miller, 2002: Miller et al., 1995: Mitchell-Weaver et al., 2000: Oakerson, 2004: Ostrom,

1972: Schester, 1996: Stephens & Wikstrom, 2000: Wallis, 1994b: 1994c). No matter how different each effort is regarding theoretical preferences and policy recommendations, organizational restructuring has always been a primary policy instrument for dealing with the problems at hand. But under what conditions these restructurings have taken place has not been not well accounted for. Urban scholars have not clearly acknowledged how the procedural perspective on governance brings clarity in understanding regional governance.

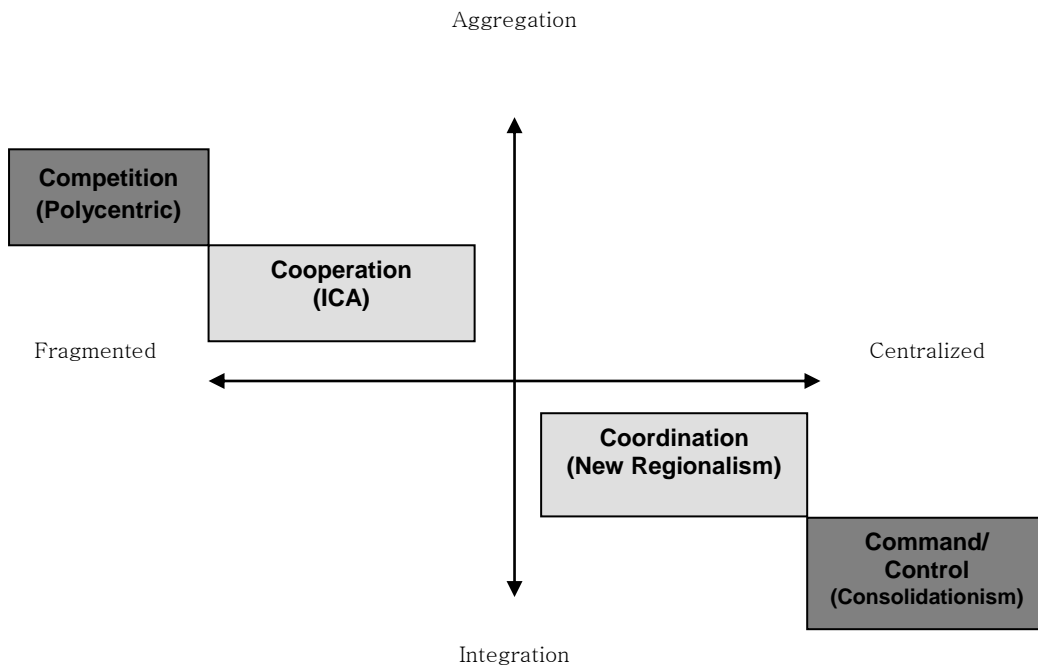
Taking the procedural perspective into consideration, this study provides a creative framework within which each advocate of regional organizational reform is positioned. <Figure 2.4> presents how modes of governance are applied to a regional level.

The four schools of thoughts in regional governance are identified and put into the boxes each mode of governance represents. From the upper left, polycentricism, institutional collective action (ICA), new regionalism and consolidationism stand for the ideological background of each mode of governance.

Although these schools of thought are all different in terms of theoretical assumptions and prescriptive recommendations with respect to regional policy problems, they share the primary policy goal of overcoming metropolitan collective action problems, particularly in the policy field of economic development.<sup>12</sup>

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<sup>12</sup> Although this dissertation does not directly deal with cultural perspectives on regional governance, its influence on theory development is essential. For instance, the main arguments of Elazar (1970)'s articulation of American political culture are surprisingly similar to the procedural aspect of the institutional perspective on regional governance in particular. According to Elazar, American political culture is rooted in two contrasting conceptions of the American political order, both of which can be traced back to the earliest settlement of the country. In the first, the political order is conceived as a marketplace in which the primary public relationships are products of bargaining among individuals and groups acting out of self-interest. In the second, the political order is conceived to be a commonwealth – a state in which the whole people have an undivided interest – in which the citizens cooperate in an effort to create and maintain the best government in order to implement certain shared moral principles (Elazar, 2003: 258-259). There is no doubt Elazar conceptualizes the mode of aggregation as the individualistic political culture while the mode of integration is perceived as the moralistic political culture.



**Figure 2-4. Theories of Regional Governance**

## **2.5.2 Regionalism: An Old Debate**

### *2.5.2.1 Progressive Reform: Toward Metropolitan Government*

In the late 19<sup>th</sup> century, when the rapid modernization of cities caused unprecedented social problems, open-minded reformers realized that the fragmented local system was no longer responding effectively to social problems. They quickly turned to an allegedly structural centralization as an imminent solution. Miller (2002) explains this reform movement of this period by quoting Hooker (1917), saying “The enlarging of the city to match the real metropolitan community is the natural method of dealing advantageously with metropolitan city planning problems.” This centralists’ proposal was to create region-wide governments by consolidating local governments or annexing unincorporated areas surrounding central cities.

To Progressive reformers, the question of urban government reform was presented as a search for correspondence between the functional territory (the urban area) and the institutional territory (the existing local government structure) (Lefevre, 1998). They expected that a consolidated government with a centralized authority could resolve this mismatch between scope

of problems and jurisdictional boundaries. At the same time, the metropolitan level government was believed to have the ability to provide a more efficient solution in dealing with seemingly duplicated services, corruption, and increasing turf wars among local jurisdictions. In his chronological study of metropolitan government in American history, Brennan (2006) indicates, however, that although the Progressive Era reformers attracted political attention successfully, the adoption of reform programs was hardly universal because the issues of political representation were not properly considered. This, along with the Great Depression, caused the Progressive reform efforts for metropolitan government to gradually disappear.

#### *2.5.2.2 Public Choice and 'Voting by Feet'*

The most influential critique of Progressive reform toward structural consolidation was Tiebout's famous theoretical conceptualization of 'voting by feet (1956).' His article is regarded as the first attempt to view metropolitan problems and solutions from the perspective of individual choice. His theory argues for a market-like system of local governance, which was believed to have the capacity to optimize allocative efficiency (Oates, 1972). The decentralized decision-making authority engenders various revenue-expenditure patterns, and according to Tiebout, given these patterns, the consumer-voter moves to the community whose service package satisfies his set of preferences best. In sum, the greater the number of communities and the greater the variance among them is, the closer the consumer will come to fully realize his preference position (Tiebout, 1956: 418).

Equally important, his article effectively called into question the need for extensive use of region-wide metropolitan government structures in the United States (Brennan, 2006: 248). He explains the failure of Progressive reforms by commenting "The general disdain with which proposal to integrate municipalities are met seems to reflect, in part, the fear local revenue-expenditure patterns will be lost as communities are merged into a metropolitan are (Tiebout, 1956; 423)"

Ostrom, Tiebout & Warren's (1961) concept of a 'polycentric political system' reflects well how political conflicts could be managed in a decentralized system. Although recent proponents of polycentricity of local governance (McGinnis, 1999: Peterson, 1981: Parks & Oakerson, 1989, 1993, 2000: Schneider, 1989) have attempted to overcome the methodological naivety of Tiebout's model, the core idea is still influential without major modification.

The significance of Ostrom et al (1961)'s article is receiving recognition from proponents of different perspectives, especially those of network analysis because they were the first ones to correctly acknowledge the importance of horizontal or inter-local relations. They argue that "to minimize the costs of conflict to their power positions, administrators of local government agencies in metropolitan areas have tended to develop an extensive system of communication about each other's experience and to negotiate standards of performance applicable to various types of public services (Ostrom, Tiebout & Warren, 1961: 842)." The focus on communication and negotiation between local agencies explains the recent explosive interest in collaboration in public administration and management field of discipline. From the perspective of this research tradition, regional governance refers to the professional management of complex relations of local governments.

### **2.5.3 *Regionalism: New Debate***

Any hope for adoption of comprehensive metropolitan governments ended with the 1960s. Public administration scholars eventually understood the political impediments to metropolitan consolidation were real.

This does not necessarily mean that the Tiebout's argument is in fact absolutely valid. Public choice tradition in the field of local and urban governance has also been criticized for its ignorance of political values such as equity, justice, and good governance. In a situation where neither a political consolidation nor a market-based exchange model is feasible, scholarly attention has been converged to build a structurally flexible and functionally effective governance model, particularly at the metropolitan level. Two main theoretical models are identified here.

#### **2.5.3.1 *Regions that consist of collaboration: Institutional Collective Action***

Originating with Ostrom et al (1961), the importance of relations has been increasingly recognized by multiple schools of thought. One of them is a group of scholars who advocate a framework of Institutional Collective Action (ICA). Their major contribution comes from the recognition of the importance of voluntary cooperation and strategic behaviors of actors. According to the leading advocate (Feiock, 2004a: 6), ICA is the mechanism by which

cooperation is achieved among local governments, between levels of governments, and between local government units and other actors in the community. ICA provides the “glue” that holds an institutionally fragmented community together and is motivated by a desire to achieve a collective benefit that could not be realized by solitary action (Feiock, 2002).<sup>13</sup> It emerges as the result of a dynamic political contracting process among local government units facing a collective action problem (North, 1990: Libecap, 1989 quoted in Feiock, 2004a: 7). It is also a remarkable theoretical progression from the polycentric perception of regional governance in that it takes the issue of redistribution into account. Since institutions always carry distributional bias, individual behavior constrained by institutions becomes evidently redistributive.<sup>14</sup> So the strategies taken are inevitably ‘nested’ in the existing institutional arrangement (Tsebelis, 1990).

However, while it successfully addresses a core problem which American metropolitan regions are living with, the ICA framework does not provide a coherent mechanism in which policy objectives can be shared and regional civil societies can be created, even though proponents clearly recognize the significance of the issue (Feiock, 2004a: 6; Post, 2004: 76). From the ICA perspective, local governments are mobilized to pursue self-interests within the context of the institutional constraints placed upon them. Diverse interests are merely assumed to be accommodated by voluntary coalitions, and only in cases where the interests are compatible with one another. Most importantly, although ICA explains patterns of regional governance, it scarcely pays attention to the ‘region’ itself. This does not mean ICA ignores the importance of the metropolitan regions in the academic inquiry of local governance. As Feiock points out, ICA

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<sup>13</sup> Paradoxically, Feiock elucidates why collective benefit cannot be a motivation of strategic behaviors in another of his articles (Feiock, 2004b: 294).

<sup>14</sup> In Tiebout’s model, distributional inequality is plainly regarded as the result of aggregations of individual preferences. Peoples live in a poor community because they ‘choose’ to live there. Since a market system is developed based on ‘one-time interaction’ between anonymous individuals, anything deflecting the free choice of individuals is regarded as ‘bad,’ because it deters efficient working of the price system. A market system operates based on the supply-and-demand function. If a person does not have resources with which she can join in the market interaction, she simply disappears from sight. In contrast, in the ICA model, distributional consequences of interaction are clearly seen for two reasons. First, unlike with a market-like system, ICA assumes that interactions are iterated (Steinacker, 2004). This means that the distributional consequences of the first interaction are naturally considered in following interactions among actors. Second, in a situation ICA imagines, actors come to perceive their gains in comparison to their neighbors’ gains, because they are well aware that the present distributional consequences definitely affects expected gains in the future. In this respect, unlike with the absolute gain perception, capability of making an accurate estimation of distributional consequences is a major attribute of successful actors or organizations.



is based on a belief that “local governments can act collectively to create a civil society that integrates a region across multiple jurisdictions through a web of voluntary agreements and associations and collective choices by citizens (Feiock, 2004a: 6).” However, the significance of the “region” as a research subject is not well addressed. Instead of being seen as an important factor in explaining variances in local governments across the country, regions, from the ICA perspective, seem to be perceived as the playing field of local actors, or the geographic boundary within which the results of cooperative behaviors of actors are realized.<sup>15</sup> This passive definition of region is not able to embrace the emerging significance of a region as an economic and social community in which a collective identity is created as well as broadly shared.

#### *2.5.3.2 Regions that nurture collaborative actors: Emergence of New Regionalism*

Even though the polycentric model of regional governance has been reinforced for decades, arguments for consolidation and centralization of governments have been recurrently empowered as well. In accordance, a number of regions such as Miami, Portland, the Twin Cities, Louisville, Indianapolis, and Kansas City have successfully managed the complex process of structural consolidation.<sup>16</sup>

According to Wallis (1994c), whereas past attempts at building a consolidated system of metropolitan governance aimed to maximize efficiency by internalizing transaction costs, new regionalists take the competitive advantage of the region as a primary policy goal (Brenner, 2002: Foster, 1997: Dodge, 1996: Downs, 1994: Feiock, 2002, Hambleton, Savitch & Stewart, 2003: Post, 2004: Savitch & Kantor, 2002: Scott, 2003: Swanstrom, 2001: Wallis, 1994c). They argue that with the national boundaries which once protected cities from external shocks having become blurred, cities or local municipalities are now exposed to a harsh zero-sum game for

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<sup>15</sup> As a result, most ICA empirical studies focus on identifying conditions that facilitate cooperation. It is hardly true to claim this shift in research interest is wrong. However, describing regional governance as an aggregated entity of local dynamics is somewhat pointless. In this respect, ICA follows the epistemological legacy of the polycentric model.

<sup>16</sup> Conceptual ambiguity of ‘region’ or ‘regionalism’ emerges from the fact that a ‘region’ is not political entity. Because it only exists as a data collection purposes, defining region for an analytical purpose requires special attention. However, over time, these regions have come to take on more than a data collection role. More often than not, individuals, groups, and organizations in these regions are beginning to think of themselves as citizens of the regions. Federal policy has encouraged the formation of embryonic regional institutions around those boundaries. As a result, we can, on a limited basis, see these regions as political as well as data collection entities (Miller, 2002: 53).

survival at both the domestic and the international level. The fragmented local political system, which was developed to deliver public services to citizens at the lowest cost possible, is not able to manage new kinds of challenges.

Quoting Barber (1995), Miller (2002) postulates that there is a fundamental paradox embedded in the simultaneous social processes of deconcentration and economic globalization. This observation raises the intriguing question of at which level societies are capable of maximizing their competitiveness. In particular, some American scholars feel obliged to assess whether cities in the fragmented American system are still as competitive as they were before. And if not, should another level of collectivity that would maximize economic competitiveness be addressed? This group of scholars, who call themselves ‘New Regionalists,’ argue that future prosperity is dependent upon the effectiveness of governance at the regional level. It is clear that the locally based, the internally focused, and the place-oriented are all largely out of fashion, while the broadly based, the externally focused, and the people-oriented are now all the rage (Imbroscio, 2006: 226).

Methodologically, new regionalists adopt an ‘organic whole (Miller, 2002)’ approach, in which a metropolitan region is regarded as qualitatively different from a collection of local governments. A region should have its own interests and be capable enough to advance its interests against local dissent. In other words, the new regionalists’ objective is to build an effective governance system at the regional level in which regional interests can be put forward while at the same time preserving local autonomy (Elazar, 1970; Frug, 1999).

This idea is not reflected in the old regionalists’ debate on effectiveness of governance structures. As Hamilton (2000: 74) nicely puts it, in the theoretical boundaries of new regionalism, the research interests are focused on the relationships among governments and governmental processes and functions. Unlike the polycentric approach, new regionalists are interested in how the collective identity is created and shared within a region, and how it is reinforced by which kinds of political process.

**Table 2-1. Theories of Regional Governance**

|                        | <b>Theories/<br/>Schools</b>                | <b>Scholars</b>   | <b>Major Arguments</b>   | <b>Weaknesses</b>   |
|------------------------|---|---|--|---|
| <b>Old<br/>Debates</b> | Polycentrists                               | Tiebout (1956)<br>Ostrom et al (1965)<br>Peterson (1981)<br>Schneider (1989)<br>Parks &<br>Oakerson(1993) | <ul style="list-style-type: none"> <li>▪ Efficiency gains are maximized in the context of market-like local governance system: Voting by Feet</li> <li>▪ Provision vs Production</li> </ul>  | <ul style="list-style-type: none"> <li>▫ Little interests in social problems such as racial segregation or poverty</li> <li>▫ Too simplified to reflect realities accurately</li> </ul>   |
|                        | Consolidationists                           | Progressive Movement<br>Rusk (1993)<br>Lowery (1998)  | <ul style="list-style-type: none"> <li>▪ A solution to negative externalities</li> <li>▪ As the scale of policy problems became larger, jurisdictional boundaries should be expanded correspondingly</li> </ul>  | <ul style="list-style-type: none"> <li>▫ Too simple answer to diverse problems</li> <li>▫ Invited bureaucratic rigidities and inefficiencies</li> </ul>   |
| <b>New<br/>Debates</b> | Institutional Collective Action/<br>Network | Feiock (2004)<br>O'Toole (1997)   | <ul style="list-style-type: none"> <li>▪ Successful Collective Action could be retained without structural reorganization at the regional level</li> <li>▪ Network is replacing bureaucracy</li> <li>▪ Recognizing the importance of the local contexts</li> </ul> | <ul style="list-style-type: none"> <li>▫ Pretty much attached to the ad hoc solutions to policy problems (dependent on decentralized decision-making power)</li> <li>▫ Region is not considered as an important economic and societal unit</li> </ul> |
|                        | New Regionalists                            | Downs (1994)<br>Lewis (1996)<br>Frug (1999)<br>Brenner (2004)<br>Wallis (1994)                            | <ul style="list-style-type: none"> <li>▪ Institutional reform at regional scale may be necessary</li> <li>▪ Economic competitiveness can be better achieved by scale of economy, and strategically integrated plan</li> </ul>                                      | <ul style="list-style-type: none"> <li>▫ Little empirical evidences</li> <li>▫ No roadmap for successful reform</li> </ul>  |

## 2.6 REGIONAL GOVERNANCE: AN INTEGRATIVE FRAMEWORK

<Figure 2.5> affirms that the understanding of regionalism requires looking at multiple dimensions, as reviewed in section 2.5. The first wave of regionalism is well known, and has sometimes been successfully applied in multiple metropolitan regions. The arrow in (a) represents the direction of organizational reform, which aims to build a regional or metropolitan government capable of dealing with a variety of ‘wicked’ problems and realizing high efficiency gains as well.

Whereas the structural perspective presents the idea that organizational consolidation of local governments can solve collective action problems with a centralized command and control system, procedural regionalism, as shown in (b), presents the idea that good governance is achieved when members of a region begin to perceive their interests from a collective perspective. Regionalism is then defined as a regionalized political process (Lewis, 1996) in which actors voluntarily pursue collective interests. Relations are never perceived as static here, nor the political process of governing.

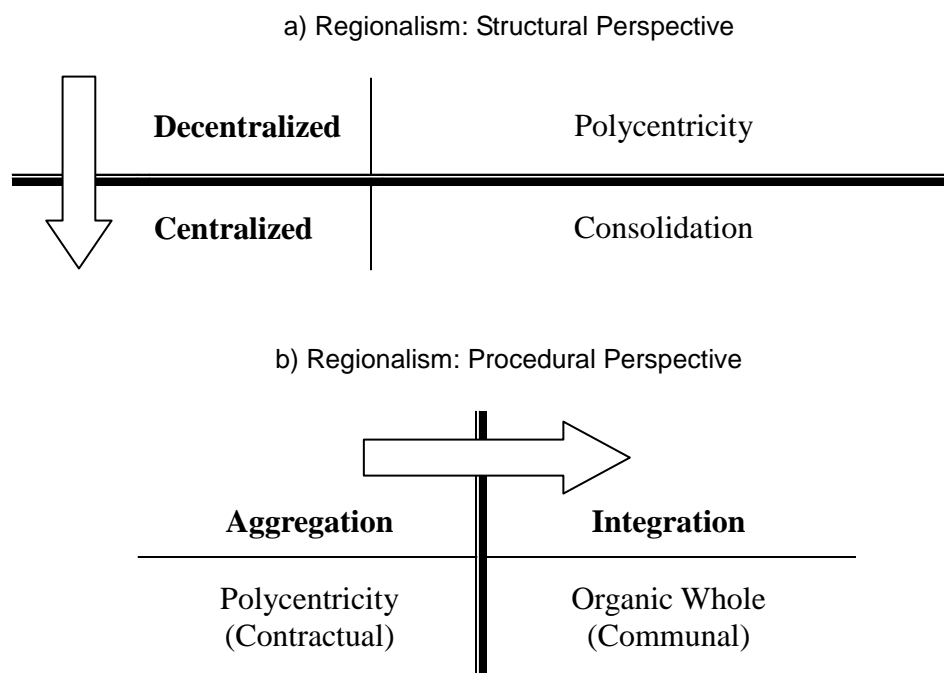
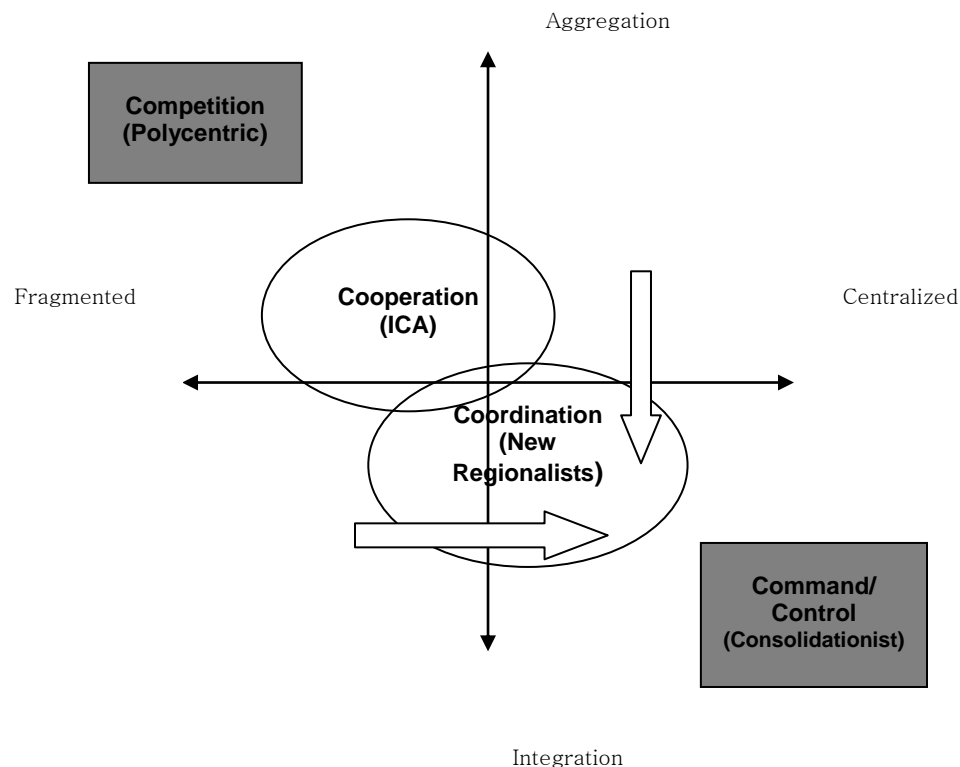


Figure 2-5. Alternative Views on Regionalism

The benefits of multiple perspectives come to be fully realized when we combine them into one framework. We now see that two arrows converge at a particular form of regional governance, the coordinated mode of regional governance.

Before proceeding to the empirical stage of research, it should be noted again that this dissertation does not give serious attention to the competition and command/control modes of regional governance. This is mainly because no metropolitan region can be put into these two conceptual categories. Thus, it would be better for us to delve into the remaining two modes, cooperative and coordinated governance.



**Figure 2-6. Modes of Regional Governance: Integrative Perspective**

<Table 2-6> summarizes the proposed 4Cs modes of regional governance. It addresses the relationship between modes of governance and patterns of collaboration. Empirical evaluation of this relationship is lacking in the literature. Not only the likelihood and extent of collaboration but also the scope and pattern of collaboration are the focus of this study. The next

chapter investigates the relationship between modes of governance and patterns of collaboration by determining factors that increase collaborative policy activities.

**Table 2-2. The Four Cs in a Regional Context**

| Attributes<br>Modes    | Structure             | Process                         | Logic of action           | Regional Governance                      | Collaboration                   |
|------------------------|-----------------------|---------------------------------|---------------------------|--|---------------------------------|
| <b>Competition</b>     | Perfect Fragmentation | Market Exchange                 | Logic of Consequentiality | Polycentricism                           | One-time Market Exchange        |
| <b>Cooperation</b>     | Network               | Mutual Adjustment by Bargaining | Logic of Consequentiality | Institutional Collective Action Theories | Voluntary (Unstable)            |
| <b>Coordination</b>    | Network               | Goal Integration by Regulation  | Logic of Appropriateness  | New Regionalism                          | Institutionalized (Stable)      |
| <b>Command/Control</b> | Perfect Hierarchy     | Command and Control             | Logic of Appropriateness  | Consolidationism                         | Pre-determined (Non-Adjustable) |

## 2.7 CONCLUSION

This chapter started by pointing out the fundamental limitations in the governance studies in general which have impeded the theoretical and empirical progress of regional governance. This chapter introduced an integrative framework of governance in which the multi-dimensionality of governance is well described.

The four modes of governance are then described in accordance with the rationales that this framework is providing. The modes of competition, cooperation, coordination, and command and control represent the dynamics multiple perspectives on governance are producing. Finally, theoretical hypotheses concerning collaborative policy activities were made based upon the ideas stemming from the integrative framework. The next chapter will empirically test these hypotheses in the field of local politics and economic development.

### **3.0 RESEARCH METHOD**

It was argued in the previous chapter that an integrative framework of regional governance is a significant marker of progress in the discipline of governance studies and regional governance in particular. But the framework in itself does not suggest which mode of governance is most effective in fostering inter-organizational collaboration. This is left to the task of empirical analysis. What the framework really adds to the research is the incorporation of procedural variables into a model of inter-organizational collaboration. Based on this idea, this chapter examines the question of how different modes of governance exert influences on the likelihood and extent of collaborative activities of local municipalities and deals with methodological issues such as measurement, data collection, and research methods. Finally, multiple hypotheses are proposed.

#### **3.1 RESEARCH QUESTIONS**

This dissertation explores two major issues. The first issue is under which structural and procedural conditions inter-organizational collaboration is facilitated. Several sub-questions follow to specify collaborative economic development as it applies in the local and regional context.

1. What are the significant factors that increase the extent of collaborative policy activities between local municipalities?

- 1-1. What factors are significant in increasing the extent of collaborative policy activities between local municipalities in the Pittsburgh region?

- 1-2. What factors are significant in increasing the extent of collaborative policy activities between local municipalities in Minneapolis region?
- 1-3. Does regional context have an impact on the extent of inter-organizational collaboration?

Assuming that the first set of questions is adequately answered, this study will then concern itself with the patterns of relationships that are differently structured in each region. While the first set of questions looks into the extent of collaboration, the second one delves into the content and scope of inter-organizational collaboration across regions.

2. How are the patterns of relationships between policy actors in the two regions different?

- 2-1. Who are the major participants in collaborative policy activities?
- 2-2. Which policy activities most frequently involve inter-organizational collaboration in each region?

These two sets of questions are fundamentally interdependent on one another. But without determining the factors fostering inter-organizational collaboration, we cannot successfully address the question of how the relations between policy actors are differently arranged in two regions.

3. Are there different patterns of collaboration that are undertaken by each region?

Finally, this dissertation is also concerned with the patterns of regional governance from macro or collective perspective. Chapter 6 will investigate this question more thoroughly.



## 3.2 KNOWLEDGE GAPS

As stated in the previous chapter, the main purpose of this dissertation is to fill the knowledge gaps in the existing literature, which fails to address a variety of issues related to inter-organizational or inter-local collaboration in the area of economic development. The first gap is in regards to empirical study of collaborative policy activities. The three most important issues with respect to empirical study are dealt with in the first part of this chapter. The second knowledge gap is related to the representativeness problem of metropolitan regions. As most scholars acknowledge, regions are neither political associations nor governing entities with sovereignties. Lacking any legitimate source of political authority, metropolitan regions are hardly considered as significant as local, state and federal governments. Then how we can conceptualize metropolitan regions for the purpose of this study? In other words, how do we define regional boundaries and how can we classify something as a regional institution with which local municipalities communicate, interact, and cooperate regarding economic development policies?

### 3.2.1 *Collaboration as a Variable*

Although interest in modes of governance at the regional or metropolitan level has been gradually increasing, the question of how they influence collaborative activities between local municipalities remains unanswered. This is because, first, in most recent studies, collaborative behaviors are seen as only one of various policy strategies. For the sake of research objectives, collaboration is rarely taken as something that needs to examination itself. Instead, it has been regarded as merely one of the variables that explain policy outcomes. Particularly in the field of policy studies, where the major interest is to determine the causal relationship between policy outcomes and a number of explanatory variables, inquiries about explanatory variables are always of secondary interest.

Second, collaboration is a very elusive concept to operationalize. A few studies such as Rawlings (2003), Wood (2004), and LeRoux (2006) have developed indexes that measure the level of collaborative activities among local municipalities in the field of service delivery,

general administration, and economic development. Other studies have conceptualized collaboration as the number of self-organized regional economic development partnerships (Olberding, 2000; Park, 2005) or local governments' decision on whether they participate in policy networks such as joint ventures (Feiock et al, 2007). This clearly indicates an absence of a standardized instrument in measuring collaboration.

### ***3.2.2 Explaining Collaboration at Multiple Levels***

The second problem in doing empirical research on inter-organizational collaboration is related to the selection of level of analysis.

Again, this question is directly related to the issue of how we perceive collaboration. If collaboration is defined as one of the interest-maximization strategies, explaining variances of collaboration may depend more on endogenous variables. This is based on the idea that, since environmental factors are not controllable, an organizational unit tends to consider its internal conditions more seriously when it is making a decision about whether or not it will collaborate. From this perspective, inner-boundary factors such as level of poverty, lack of resources, and jurisdictional locations become the major factors that influence a tendency towards collaboration on the part of local municipalities. But as an ignorance of historical and contextual factors appears to distort decision functions, the level of collaboration is decided away from the optimal level.

Alternatively, collaboration can also be perceived as much more than a policy strategy. From a societal point of view, collaboration could be defined as a cultural legacy that circumscribes individual or organizational behaviors. Studies done by those supporting this perspective are used to explain variances in collaborative activities at a more collective level. For example, factors that influence local municipalities' tendency to collaborate are sought outside their jurisdiction. Putnam (1993)'s idea of social capital represents this academic position well. However, since studies in this tradition often ignore organizational attributes, there always exists a possibility for them to commit the fallacy of structural determinism.

In order to avoid the mistakes originating from each of these perspectives, this dissertation employs an eclectic and compromising approach. This is done by measuring the cultural factors stressed in the second view at a lower level, such as the organizational level, and

incorporating them into an analytic framework. More technically put, instead of assuming cultural influences are universal within a given region, this dissertation takes the stance that the impact of cultural factors varies across local municipalities even within the same metropolitan regions. Given this, the intensity of integration of local municipalities to a higher political level becomes the important variable in the empirical analysis.

### ***3.2.3 The Missing Link: Between Regional Governance and Economic Development***

The final problem in collaboration studies with respect to empirical analysis is more or less practical. The question is: How can knowledge on collaboration be used? In other words, for what purpose should collaborative activities encouraged? These questions focus on the practical use of collaborative strategies in a variety of policy areas.

The first objective of inter-organizational collaboration is to increase efficiency in public services delivery. Studies dealing with service deliveries contend that local municipalities tend to cooperate with actors outside their jurisdictions only when they expect efficiency gains. Collaborative strategies such as joint purchase, contracting out, and inter-local agreement are most widely used. The main purpose for use of these policy tools is to take advantage of economy of scales by consolidating the production functions of local municipalities (McGinnis et al, 1998; Parks & Oakerson, 1989) or to decrease transaction costs by means of formal or informal agreement on service delivery (Chrisholm, 1992). Accordingly, the more collaborative municipalities are, the more efficiently public services can be delivered to citizens. However, much of the knowledge these studies supply is not informative in building an empirical model of collaboration in the policy field of economic development, which is the focus of this dissertation.

Only a few studies probe the relationship between collaborative policy activities and the level of economic development. However, previous studies on regional economic development in particular rarely address collaboration as one of the probable strategies. Instead, structural differences among metropolitan regions seem to be preferred as the explanation for regional variances in economic development. For example, Hamilton et al (2004) puts forth a persuasive argument about the relationship between governance structure and economic competitiveness at the regional level. According to them, although a specific form of mode of governance is hardly significant in producing high economic performance in the short run, it clearly matters in the

long term because it determines the capacity of a region to adapt to a changing environment. However, no matter how well this argument is postulated, the authors provide no information on the mechanism of how each governance structure actually catalyzes economic growth.

This dissertation aims to fill this knowledge gap with careful observations and empirical analyses of the political mechanism of collaboration. If I can find covariance between collaboration and economic development, it would be a good start for the future researches to inquire this relationship more deeply.

### ***3.2.4 Problem of Representing Metropolitan Regions: Metropolitan Planning Organizations***

As Miller (2002) succinctly puts it, a metropolitan region can be defined only by being attached to existing patterns of intergovernmental relationships between local, state, and federal governments. Since there are 50 different and very distinctive patterns of relationships—one for each state, it has been regarded that systematic understanding of metropolitan regions is hardly achievable. This ambiguity inherent in the concept of metropolitan region prevents us from seeing it as an independent level of governance. For example, the Office of Management and Budget (OMB) establishes and maintains the definition of Metropolitan Areas solely for statistical purposes, and warns against using those definitions for any application but statistical applications.

Conversely, with the passage of The Intermodal Surface Transportation Efficiency Act of 1991 (Public Law 102-240; ISTEA), the Department of Transportation has forced the flow of federal highway dollars through a metropolitan regional organization, generally utilizing the definitions supplied by the OMB (Millers, 2002: 6).

What this legislation brought to the field of regional governance is the strengthening of the regional institution, the Metropolitan Planning Organization (MPO). ISTEA reversed the trend of deterioration of urban problems with its renewed emphasis on the metropolitan transportation planning process. The legislation was designed to put in place a framework to guide the operations, management and investment in a surface transportation system that is largely in place. ISTEA strengthened the metropolitan planning process, enhanced the role of local elected officials, required stakeholder involvement, and encouraged movement away from modal parochialism toward integrated, modally mixed strategies for greater system efficiency,

mobility and access (<http://www.ampo.org/content>). In essence, the strengthening of the MPO represents the collective, integrated, and regional approach to inter-jurisdictional policy problems, especially in the field of transportation.

I believe examination of the MPO serves the objective of this dissertation better than examination of the MSA for two reasons. First, it has both the content and structure of a regional institution. Despite its lack of formal authority, the MPO is at least supported by its administrative arms and by a certain degree of discretion in allocating transportation funds. Local municipalities seeking transportation funds have to interact with their regional MPO, and in doing so, inter-organizational relationships are created.

Second, the issue of regional boundary is more clearly addressed by the definition of MPO. It provides the criterion by which we can distinguish metropolitan regions from those outside. The concept of boundary or jurisdiction is important in studying regional governance because without this concept, it is hardly possible to define actors and structures that compose the collective entity.

This dissertation takes the MPO as the regional institution for study for these reasons. In order to study regional governance and collaboration, metropolitan regions need to be addressed as tangible entities; therefore, the Metropolitan Council in Minneapolis and the Southwestern Pennsylvania Commission in Pittsburgh serve each region as the MPO.

### **3.3 A SUMMARY OF REGIONS**

In order for this dissertation to avoid false generalizations, an understanding of the social and political contexts of both metropolitan regions is plainly critical. Although it is impossible to describe details of regional characteristics in the limited space here, some are worth intensive attention.

### **3.3.1 *Toward Metropolitan Government: Minneapolis***

#### *3.3.1.1 The background of Metropolitan Reform in Twin Cities*

The year 1967 will be remembered as the year when one of the largest metropolitan regions in the US was finally able to build a regional governing institution - The Metropolitan Council. This choice has been called Minnesota's most successful achievement on the one hand, but on the other it has also been a target of political criticism for its inefficiency and unrepresentativeness.

Typically it is a crisis that leads to this kind of comprehensive reform. Harrigan & Johnson (1978) suggest that at least four conditions facilitated metropolitan reform in the Minneapolis region. According to them, none of them by itself was the determinant, but without each one, the prospects for reform would have been much poorer (Harrigan & Johnson, 1978: 22-23).

First, the obvious distinction that the region enjoys -two central cities and thus two growth nuclei- has minimized the rise of an overpowering "anti-big city" feeling among suburbanites.

A second important feature is that the Minneapolis region experienced little of the suburban distrust and antagonism toward the central city area that was detrimental to metropolitan reform in other cities such as Cleveland and St. Louis.

Third, the moralistic political cultures, which were as coined by Daniel J. Elazars (1970), certainly played an important roles in its as support of high expenditure for public services, which in turn enabled this region to a build metro-level government.

Closely associated with the political culture is a fourth distinctive feature of the Twin Cities region - the existence of some broadly based, unifying civic institutions that participate forcefully and effectively in political decisions.

#### *3.3.1.2 Metropolitan Council: A True Metropolitan Authority?*

In essence, Metropolitan Council is a metropolitan planning and policy-making authority. The Metropolitan Council is made up of 17 members appointed by the governor to represent geographic districts. It is also designated as the Twin Cities' regional Metropolitan Planning Organization (MPO).

According to Harrigan & Vogel (2001), the Council has four major powers. First, as the metropolitan planning agency, it is responsible for preparing the metropolitan development guide. It is a statement of policies on topics that range from the location of airports to solid waste disposal to the distribution of low-income housing throughout the suburbs to the channeling of future growth into predetermined locations in the regions.

The Council's second responsibility is reviewing the comprehensive development plans of the local governments in the region. Third, the Council oversees and coordinates the metropolitan commissions responsible for transits, waste control, and regional parks and open space. The fourth power of the Metropolitan Council is to review applications from local governments and private organizations for many federal and state grant and loan guarantee programs (Harrigan & Vogel, 2001: 302).

The Metropolitan Land Planning Act of 2004 reinforces the Council's authority on economic development. The Council prepares forecasts of regional growth based on such information as U.S. Census data, regional growth trends and demographics (Minn. Stat. 473.146). With each community, the Council negotiates the share of growth which that community will plan for, taking into account Council policies, local land-use patterns, developable land supply and the community's current comprehensive plan. The outcomes of negotiation are reflected in a Development Framework, within which local governments take responsibility for meeting local needs.

Once it revises its local plan, the community sends its plan to adjacent municipalities for them to consider the plan's impact and to the Council for its review based on requirements of the Land Planning Act and other state and federal guidelines.<sup>17</sup> The Land Planning Act requires the Council to consider a plan's compatibility with the plans of other communities and its consistency with adopted Council policy plans, as well as its conformity with metropolitan system plans (Minn. Stat. 473.175). If the Council finds that a community's plan is more likely than not to have a substantial impact on or contain a substantial departure from metropolitan

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<sup>17</sup> Before a municipality submits its updated or amended comprehensive plan to the Metropolitan Council it must take the following steps: 1) Allow for adjacent governmental units and affected school districts to review and comment 2) obtain Planning Commission approval 3) obtain Local governing approval (but not final adoption). Local governmental units must not confer final approval of the plan or implement any part of it before the Metropolitan Council has reviewed and, if necessary, commented on it (Minn. Stat. 473.585, Subd.2).

system plans, the Council can require the community to modify its local plan to assure conformance with the metropolitan system plans (Minn. Stat. 473.175).

The short legal statements above verify the fact that the Metropolitan Council holds a strong authority on a variety of policy fields involving economic development within its seven-county jurisdiction. Local municipalities are not only legally required to communicate on their comprehensive plans but also to hold all individual policy activity until Metropolitan Council approves their plans. In this process, local municipalities naturally come to share various perspectives on immediate policy issues, including their neighbors' and regional policy interests.

The Metropolitan Council's review criteria confirm this observation. In its review of a local comprehensive plan, the Metropolitan Council views a jurisdiction's intended actions from the perspective of the Metropolitan Land Planning Act and the interests of both adjacent jurisdictions and the regional system plans. The review is designed to determine how the community's planned actions relate to the interests of the regions over the long term. Local comprehensive plan updates and amendments are evaluated relative to three criteria: Conformance, Consistency, and Compatibility (Metropolitan Council 2005: 1-13). Local plans should conform to all metropolitan systems policy plans for transportation, water resources, and parks. Plans should meet with requirements of the Metropolitan Land Planning Act and Metropolitan Council policies. Finally, local plans should be compatible with the plans of other local jurisdictions, including school districts.

In sum, governance in the Minneapolis region cannot be imagined without Metropolitan Council's strong policy initiatives. Despite the political controversy about the overall effectiveness of Metropolitan Council, it still strongly influences peoples' lives directly and indirectly, and its responsibilities are continuously expanding. How these regional norms and rules influence the municipalities' horizontal relationships addressed in the empirical part of this dissertation.

### ***3.3.2 Partnerships in the Context of Hyper-Fragmentation: Pittsburgh***

#### ***3.3.2.1 History of Partnership***

According to Miller's MPDI index, the Pittsburgh region scored 5<sup>th</sup> highest in 1992. The Pittsburgh metropolis has 549 general purpose local governments within its 10-county boundary.



There is no area available for future incorporation, and Pennsylvania's tough legal code does not allow local annexation. This complete inelasticity defines the local and regional political context of Pittsburgh metropolis.

But surprisingly, the Pittsburgh region has nurtured a cooperative culture for decades. When we compare Pittsburgh with other highly fragmented regions such as Philadelphia, Saint Louis, and Chicago, this fact becomes more outstanding. Particularly in the field of economic development, the Pittsburgh region has forged a "third way" of producing urban development (Sbragia, 1990). Pittsburgh's transition was constructed through the organizational capacity of a public-private partnership. A centralized network of business and government organizations has provided an effective tool for setting development goals and implementing them (Jezierski, 1996: 161). The interdependency of the public and private sectors coincided with the decline of big bureaucracy. It also spurred an inter-sectoral network system to take over developmental decision-making authority to a considerable extent.

In her comparative study of Pittsburgh and Chicago, Ferman describes that in Pittsburgh, the weight of precedent and the lure of the incentive structure pushed strongly toward nonconflictual, accommodative behaviors. Such behavior, in turn, reinforced the inclusionary orientation that permits the coexistence of numerous organizations (Ferman, 1996: 141).

### *3.3.2.2 Advocacy without Authority: Southwestern Pennsylvania Commission*

The cooperative culture in the Pittsburgh region has been institutionalized in a variety of ways. One of the attempts to support cross-boundary communication resulted in the creation of regional level institutions. The Southwestern Pennsylvania Commission was created as one of these organizations, and it now serves the Pittsburgh region as a designated Metropolitan Planning Organization (MPO).

The Southwestern Pennsylvania Commission (SPC) is the regional planning agency serving the Pittsburgh 10-county area and providing essential services to the region. The official Metropolitan Planning Organization (MPO), the SPC directs the use of all state and federal transportation and economic development funds allocated to the region - approximately \$33 billion through 2030. For example, the SPC helps counties, cities, municipalities, and townships use federal transportation funds in a timely way.

The SPC is also the region's designated Local Development District and Economic Development District by the US Appalachian Regional Commission and the US Department of Commerce. In this role, the SPC establishes regional economic development priorities and provides a wide range of services to the region (<http://www.spcregion.org/about.html>).

The SPC's role in regional development should not be underestimated. As a designated MPO, the SPC's authority in allocation of transportation funding can significantly influence the location of development projects. Decisions on which projects will be funded determine where growth occurs and more importantly, where growth does not occur (Miller, 1999). With this capacity, it provides an important link between the federal government and local municipalities.

Although it has diverse resources and authorities within its boundary, SPC cannot be overestimated as a true regional governing institution either. In contrast to the Metropolitan Council, the SPC's legal status is not based on State legislation. The SPC can only hold authority with local municipalities' voluntary cooperation. Even in the transportation funding allocation process, a local municipality cannot be coerced to follow the SPC's decision unless it is willing to give up its local sovereignty.

In sum, we can safely argue that in the Pittsburgh region, the SPC works as a premier advocacy organization for regional economic development and planning. It provides opportunities for county representatives to discuss regional policy issues and create informal networks among local elites. However, its effectiveness in inducing municipalities' cooperation on regional issues has not been proved yet.

### ***3.3.3 Minneapolis vs Pittsburgh: A Comparison of Regions***

No metropolitan region can be identical to another. There are a considerable amount of similarities as well as differences across regions. This section addresses the fundamental attributes of each case in order to decide whether these two metropolitan regions are truly comparable.

<Table 3-1> presents the basic statistics that define each region. With respect to demographic attributes, the two regions are almost identical with populations around 2,650,000. Racial diversity seems to be lower in Pittsburgh, where the percentage of the white population is

above 90%. Considering the relatively high percent of African-Americans (7.4), the two races constitute almost 98% of the total population in Pittsburgh, which is also very high in comparison to Minneapolis region, where these two races only make up 91%. But when we compare this summary with other metropolitan regions, the two regions can be regarded as similar in terms of racial homogeneity.

The two regions are also very similar in industrial composition. The industry of Educational, Health & Social Services makes up the largest part of both regional economies, followed by Manufacturing, Retail, and Professional management industries. This similarity is critically important because regional and local economic conditions tend to delimit local municipalities' development choices to a large extent.

**Table 3-1. A Comparison of Regions**

|  | <b>Minneapolis</b>         | <b>Pittsburgh</b>            |
|--|----------------------------|------------------------------|
| <b>Population</b>  | 2,642,056                  | 2,656,007                    |
| <b>Race</b>  |                            |                              |
| White  | 84.7%                      | 90.3%                        |
| African-American   | 5.9%                       | 7.4%                         |
| <b>Ancestry</b>  |                            |                              |
| German   | 26.5%                      | 26.1%                        |
| Irish  | 10.1%                      | 16.8%                        |
| Italian  | 2.2%                       | 15.0%                        |
| Norwegian  | 11.3%                      | 0.2%                         |
| Swedish  | 8.0%                       | 0.8%                         |
| <b>Industry</b>  |                            |                              |
| Educational, health & Social Services                                    | 19.2%                      | 22.8%                        |
| Manufacturing  | 15.3%                      | 12.6%                        |
| Retail Sale  | 11.7%                      | 12.7%                        |
| Professional, Scientific, management, Administrative, & waste management | 11.7%                      | 8.9%                         |
| <b>Per Capita Income</b>   | 26.219 (7 <sup>th</sup> )* | 20.935 (90 <sup>th</sup> )** |
| <b>Poverty Status</b>  |                            |                              |
| Percent below poverty level  | 6.9%                       | 11.2%                        |
| <b>Structural Fragmentation</b>  |                            |                              |
| Number of Local Municipalities   | 194                        | 549                          |
| Miller's MPDI (1992)   | 9.36 (7 <sup>th</sup> )    | 11.57 (4 <sup>th</sup> )     |
| <b>Economic Competitiveness (1973-1997)</b><br>Paytas (2001)             | 1.88                       | -9.06                        |

\* Minneapolis MSA (includes 7 Metro region counties plus Chisago, Isanti, Sherburne and Wright County)

\*\* Pittsburgh MSA (includes Allegheny, Beaver, Butler, Fayette, Washington, and Westmoreland County)

In respect to economic and fiscal capacity, the Minneapolis region is much more affluent than Pittsburgh. Among 331 Metropolitan Statistical Areas (MSA), Minneapolis ranks 4<sup>th</sup> in the category of per capita income. The Pittsburgh region is struggling a bit compared to Minneapolis, with a per capita income. Likewise, the strong economic situation of the

Minneapolis region makes poverty problems relatively manageable, while the Pittsburgh region seems to suffer more from a more unequal distribution of resources and fiscal capabilities.

The level of structural fragmentation is very high in both regions. While the absolute number of general purpose governments are significantly different (194 in Minneapolis, 549 in Pittsburgh), a systemic measure of ‘real’ fragmentation indicates municipalities in both regions have to deal with fragmented local systems to a comparable extent.

The final information provided by <Table 3-1> is that the Minneapolis region as an economic entity is more competitive than the Pittsburgh region. Although Paytas (2001)’s conceptualization of competitiveness is far from perfect in measuring regional economic competitiveness, its methodological integrity provides a dependable criteria based on which we can evaluate the economic condition of the metropolitan regions. According to his index, Pittsburgh is far less competitive than national average, while Minneapolis maintains a fair level of competitive advantage in most of its industry.

It is evident that the two regions are different. But the similarities between the two regions are significant enough to allow me to compare the two regions in more detail. Now the focus moves to the issue of a relevant research methodology to allow me to extract as much useful information from this comparison as possible.

### **3.4 RESEARCH METHODOLOGY**

#### ***3.4.1 Small N Comparative Research Design***

This dissertation proposes that a particular mode of governance can be a major facilitator of collaborative activities among local governments. The theoretical speculations given in the previous chapter provide information as to why the ‘regional factors’ are important in understanding local municipalities behaviors. In order to answer the question of how these factors work, a careful comparison of regions is required, with a particular focus on modes of governance and collective actions.

Comparison as a research strategy permits us to delve deeply into political and institutional dynamics, which variable-centered studies tend to overlook (Ragin, 1987). This can be done by delineating how critical contextual factors shape the direction of politics and policies (Ferman, 1996). However, while the comparative method allows for making use of contextual details, it presents difficulties with respect to gathering data, utilizing statistical methods, and most importantly, generalizing conclusions. Therefore, research objective, availability of the data, and scope of the study must be considered carefully when applying this method of study.

This dissertation conducts an exploratory as well as an explanatory comparative case study on collaborative policy activities in two metropolitan regions in the field of economic development. It is exploratory since 1) it is searching for a new possible explanation of variances in the dependable variable, 2) it does not limit its academic endeavor to testing existing propositions about collaboration, and 3) it utilizes extensive materials from multiple sources of information to provide an in-depth picture of the cases (Creswell, 1998). One of the primary goals of this dissertation is to discover unknown or hidden relationships and, finally, generate hypotheses for future studies (King, Keohane, and Verba, 1994). At the same time, this research is concerned with methodological problems such as measurement of collaboration and appropriate level of analysis.

It is also explanatory because it is strongly concerned with proving causal relationships between carefully selected independent variables and the extent of collaboration. Probing significant factors that would foster inter-organizational collaboration is undeniably important; however, this study goes one step further and conducts rigorous empirical tests using a variety of scientific method. However, inter-organizational collaboration, the major subject of this dissertation, has not been operationalized accurately, let alone systematically organized. Therefore, with the shortage of time and resources allowed, this study can only focus on a small number of cases and relies mostly on first-hand data obtained from structured surveys and interviews.

While there is only a small number of regional institutions that possess the overarching authority over local governments in their boundaries, among them, the Minneapolis region is thought to be best for the purpose of the study because it is composed of densely populated independent municipalities which are fairly comparable to Pittsburgh region. This satisfies a

basic assumption of the design principle, which is defined as the most similar comparative design.

### ***3.4.2 Selection of Cases: The Most Similar System Design***

Explaining differences and similarities between political or social systems has been acknowledged as two major objectives of comparative social research. According to Przeworski & Teune (1970), the comparative method could be specified by an array of ways to select cases. Considering the cases at hand, the most similar system design, which attempts to control extraneous variances as much as possible, would be a logical selection for the purpose of the study. As argued above, although two regions would be shown as differently as they are similar enough to be compared, this study believes that the selection of cases within the national context of U.S already puts a number of alternative explanations away. Furthermore, census statistics and academically developed indexes such as MPDI (Miller, 2002) and PFI (Lewis, 1996) shows that institutional structures of two regions are similar enough to be analytically compared.

This similarity makes it possible for us to determine significant factors that may explain divergence in collaborative activities. One possibility is found in the differently arranged governance structures. In some instances, the Metropolitan Council in the Minneapolis region is able to force local municipalities to comply with a regional blueprint for future development policies, while municipalities located in Southwestern Pennsylvania are more likely to pursue short-term individual gains regardless of their long-term effects on the region as a whole. For example, as mentioned above, Minnesota's State Statutes such as the Metropolitan Land Planning Act of 2004 require municipalities in the region to submit their local comprehensive plans to the Metropolitan Council for review and, as necessary, for appropriate corrective actions (Minn. Stat. 473. 175). This means the State of Minnesota bestows a powerful authority on the Metropolitan Council to force cooperation within its 7-County region. This particular institutional rule is the very factor that makes it possible to define Minneapolis' regional policymaking process as coordinated.

In contrast, although the Southwestern Pennsylvania Commission strongly advocates regionalist ideas, the Pittsburgh region still remains one of the most fragmented areas in the U.S. Without legitimate authority as a last resort for resolving conflicts of interest, it is natural that for

local actors with vested interests, unilateral interest maximization is the best strategy. In the vocabulary of game theory, actors prefer defection to cooperation if it guarantees the highest payoff for them. Of course, this does not necessarily mean that there is no collaborative activity in Pittsburgh region. In contrast to the theoretical expectation, Pittsburgh has been recognized as a successful case of cooperative partnership (Ferman, 1996; Savitch & Vogel, 1996). But what this region still lacks, in comparison to the Minneapolis region, is a region-wide authoritative institution that could defend regional or collective interests. This difference is sufficient enough for this research to look at the effectiveness of policy coordination by regional institutions on economic development.

### ***3.4.3 Research Design: Nested Comparative Case Study***

The problem that previous research has not addressed well is how different levels of analysis can be integrated in one study. As discussed in 3.2.2, collaboration among local municipalities can be explained at two different levels of analysis: the micro and the macro level. From the micro perspective, collaboration is conceptualized as the outcome of municipalities' strategic calculation. In contrast, from the macro or aggregate point of view, it is just a politically appropriate behavior that has been inherited for a long period of time.

The proper research design should take the impacts of both social and environmental contexts at the macro level and individual attributes at the micro level into consideration at the same time. In other words, the mode of explanation of this research should utilize endogenous as well as exogenous variables.

But it is hard to take both levels' influences into consideration simultaneously. Moreover, even where possible, it is questionable whether this sort of research design is methodologically valid. The serious level incongruence or multilevel problems would incur irrelevance of research outcomes or make statistical inferences unreliable.

The most widely used methodological solution for the multilevel problem would be an adoption of a specially developed statistical method such as a hierarchical linear model (HLM). HLM provides a conceptual framework and a flexible set of analytic tools to study a variety of social, political, and developmental processes. However, this study does not employ this analytic method, and instead attempts to resolve multilevel problems at the measurement level.



Municipalities are undoubtedly ‘nested’ in regional, state, and federal level of governance. Visible or not, these political as well as administrative levels of governance influence local government in a variety of ways in the economic development policy process. This ‘nestedness’ is inevitably reflected in municipalities’ decisions on economic development policies. So, if we successfully capture the municipalities’ perceptions of institutional influences on multiple levels of governance, we can argue that the ‘nestedness’ of local decisions are well reflected in the measurements. At the same time, since this variable is measured and obtained at the local government level, it would not cause any multi-level problems.

In sum, methodologically, this dissertation can successfully overcome the tradeoff between explanatory power and analytic robustness by incorporating macro-level influences into micro-level measurement. Regional, state and federal level influences on local decisions are successfully represented without a sophisticated analytic method such as the Hierarchy Linear Model.

### **3.5 DATA COLLECTION AND MEASUREMENT**

#### ***3.5.1 Unit of Analysis***

The basic unit of analysis in this dissertation is the local municipality. While a number of recent studies on regionalism take metropolitan regions as units of analysis (Olberding, 2000; Paytas, 2001; Park, 2005), their research can provide local public officials with only very limited practical information on how to use collaborative policy strategies.

In addition, reflecting the increasing attention paid to collaboration in governance studies, this study focuses on relations among governmental organizations as well. It presents a basic idea of the institutional framework, in which regional outcomes of economic development policies are regarded as the product of interactions between structural attributes of the region and the complex political process of ‘who gets what.’

While organizational units have frequently been taken as units of analysis, relations have scarcely been examined in the field of social science, mainly because relations in themselves are

neither stable nor easily observable. However, with a serious interest in the relational dynamics of policy processes, this dissertation seeks to observe and measure diverse relationships between a wide variety of regional actors. This analytic endeavor will be greatly assisted by use of multiple research techniques. Inquiry on inter-organizational relationships will be exclusively conducted in chapter five taking the network perspective on regional governance.

The units of observation are chief administrative officers of local governments in two regions. Assuming that they are most knowledgeable in local development policymaking, we can expect that their expertise can provide the most reliable and valid information.

### ***3.5.2 Sampling***

Both the Minneapolis and the Pittsburgh region are recognized as examples of highly fragmented areas. Miller's Metropolitan Power Diffusion Index (MPDI) estimates values of 9.36 and 11.57 respectively, and they rank 7<sup>th</sup> and 5<sup>th</sup> among 331 U. S. metropolitan regions. There are 194 general-purpose governments in the Minneapolis' region, and 549 in the Pittsburgh region. A total of 743 local municipalities, including cities, towns, townships, and boroughs constitute these two regions. This study does not include special purpose districts and school districts. This is because, first, only general purpose local governments exclusively contain authorities on comprehensive development plans, and equally importantly, they are considered to play a central role in the process of policy implementation far more effectively than any other kinds of organizations.

With limited resources prohibiting population analysis, this study examines the 209 biggest general purpose governments in the two regions in accordance with the population size (75 in the Minneapolis region and 134 in the Pittsburgh region). This is because the administrative and fiscal capacities that are necessary for economic development are better preserved in larger governments. Small cities often rely on substate or regional planning agencies to do their planning, zoning, and codification work (Agranoff & McGuire, 2003: 84).

### **3.5.3 Structured Survey**

The survey method produces both qualitative and quantitative data. The target recipients of the survey are chief administrative officers who are primarily responsible for local economic development policies. The survey consists of three parts, each of which is designed to produce data on organizational attributes, collaborative activities and intensity of policy integration of local governments, and pattern of communication with various governmental organizations.

Previous surveys conducted by ICMA (International City/County Management Association), Agranoff & McGuire(1998: 2003), Olberding (2001), Park (2006), and Wood (2004) were quite resourceful for this survey. Specifically, the questionnaires in ICMA's periodic survey are used without major modification.

## **3.6 OPERATIONAL DEFINITIONS, VARIABLES, AND HYPOTHESES DEVELOPMENT**

### **3.6.1 Dependent Variable: Collaborative Index**

Collaboration generally refers to any joint activity by two or more agencies that is intended to increase public value by their working together rather than separately (Bardach, 1998: 8). As few studies actually measure collaborative relations among organizations, social researchers are still debating the validity of measurements of collaboration. With a lack of agreed-upon collaboration data, the survey questionnaires are carefully articulated to capture the instances of collaboration.

The major measurement instruments for collaborative activities, displayed in <Table 3-2>, were originally developed by Agranoff & McGuire (2003). I changed the original survey questionnaires in order to reflect the role of contextual distinctiveness involved in economic development policy process. The questionnaire categorizes municipalities' collaborative activities into three sub-categories representing the functions of joint-policy effort, resource exchange, and project-based work.

This measurement represents inter-organizational collaborative activities between local municipalities and organizations in public, private, and non-profit sectors. By inter-organizational collaboration, I follow the definition of Agranoff and McGuire, meaning “working the highly interdependent local policy process, attempting to pool and use differential resource contributions, building bases of support, and determining feasible course of action (Agranoff & McGuire, 2003: 80).” The activities included in the table represent the most frequently used tactics when local governments are involved in inter-organizational interactions.

While Agranoff and McGuire do not acknowledge the qualitative differences among the activities, this study gives some weight to the joint policy efforts, except for the activity of technical assistant. This is because those three activities are more likely to involve interest accommodation or policy integration than others. During the joint policy process, from the creation of policy coalition to joint implementation of such policies, localities must build a certain level of reciprocity and trust, without which any kind of policy coalition is fundamentally fragile. This kind of inter-local collaboration is not likely to be terminated, even after the joint objectives are fully accomplished.

**Table 3-2. Measuring Instrument of Collaborative Activities**

| Type of Activities  | Activities Used                       | Weights |
|---------------------|---------------------------------------|---------|
| Joint Policy Effort | Receive Technical Assistance          |         |
|                     | Engage in Formal Partnership          | √       |
|                     | Engage in Joint Policymaking          | √       |
|                     | Engage in Joint Policy Implementation | √       |
| Resource Exchange   | Pool/Share Financial Resources        |         |
|                     | Pool/Share Personnel Resources        |         |
| Project-based work  | Contracting-out Planning              |         |
|                     | Partnership for a particular project  |         |

Source: Agranoff, Robert & Michael McGuire (2003), *Collaborative Public Management: New Strategies for Local Government*, Washington D. C.: Georgetown University Press.

In contrast, other policy activities tend to be short-lived (Contracting-out, partnership for a particular project), technical (Receive technical assistance), or economical (Sharing/Pooling resources). While still significantly collaborative, these activities create neither reciprocal relationships nor collective identity as effectively as joint policy efforts would.

### ***3.6.2 Independent Variables and Hypotheses Development***

The independent variables for this study are divided into procedural and structural variables. Procedural variables measure the intensity of policy integration on three levels of governance - regional, state, and federal. Structural variables are further divided into three sub-categories which are Municipality Characteristics, Economic/Fiscal Factors, and Political/Governmental Institutions, respectively.

#### ***3.6.2.1 Procedural Variable: Regional, State, and Federal Integration Index***

This measurement index was originally developed to record local governments' vertical collaborative activities with state and federal governments. Instead simply applying this index to the contexts of Minnesota and Pennsylvania, this dissertation reconfigures this measurement tool to reflect the propensity of local governments to collaborate with the regional, state, and federal institutions in each region. The Metropolitan Council in the Minneapolis region and the Southwestern Pennsylvania Commission in the Pittsburgh region represent the regional institutions in each metropolis.

With the lack of a standardized measure of vertical integration, recording the quantity and quality of vertical interactions at multiple levels act as a surrogate for the purposes of this study. For example, the operationalization of regionalism is built on the idea that the more local governments are involved with regional institutions, the more willing to adopt a regional perspective those local governments will be in local development policymaking process. The same rationale can apply to vertical integration at other governance levels.<sup>18</sup>

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<sup>18</sup> Although there are some policy fields that may require local compliance with regional rules, politically it is difficult to argue that the relationship between regional institutions and local governments is vertical.

**Table 3-3. Measurement Instrument of Regional, State, and Federal Integration Index**

| <b>Types of Activities</b> | <b>Activities Used</b>                                       | <b>Weights</b> |
|----------------------------|--|----------------|
| Information Seeking        | Seek general program information                             |                |
|                            | Seek new funding of programs and projects                    |                |
|                            | Seek financial assistance through grants                     |                |
|                            | Seek interpretation of standards and rules                   |                |
|                            | Seek policy guidance   |                |
|                            | Seek technical assistance                                    |                |
| Adjustment Seeking         | Request Statutory/Regulatory relief, flexibility, or waiver  | √              |
|                            | Request change of official policy                            | √              |
|                            | Request resolution of conflicts with other local governments | √              |

Source: Agranoff, Robert & Michael McGuire (2003), *Collaborative Public Management: New Strategies for Local Government*, Washington D. C.: Georgetown University Press.

Vertical policy activities are divided into two types: information seeking activities and adjustment seeking activities. In the first, local governments are expected to seek tactical assistance from higher level institutions, while in the latter the governments tend to adjust programs of their own to collective rules or regulations or seek some slack in hierarchical regulations. The adjustment seeking activities are particularly important because local governments are more likely to adopt a collective perspective in these kinds of policy interactions. Furthermore, while information seeking activities are likely to be short-lived, adjustment seeking activities promote long-term relationships between local officials and officials in other levels of government. Regionalism is easy to address in this context because city officials must jointly establish a course of action with regional officials, who bring the regional perspective into the interaction. Thus this type of activities should be weighted more because of its significance in the development of collective identity. The propensity of local municipalities to collaborate with State and Federal government can be easily captured in the same way.

Methodologically, these variables measure the procedural aspect of governance illustrated in the last chapter. A high value for these variables represents a high level of political

and cultural integration in the given governmental level. Municipalities with a low level of integration are likely to be more independent in the developmental policy process and are also more likely to favor formal negotiations or contracts over consolidation of policy activities. In general, metropolitan regions with high average values for the procedural indexes can be defined as culturally integrated, while regions with low values can be seen to operate under an aggregated mode of governance.

**H1a:** The Regional Integration Index (RI) is positively related to the extent of collaborative policy activities, indicating that cultural and political integration advances regionalism more effectively than aggregation of individual municipalities' interests.

**H1b:** The Regional Integration Index (RI) is negatively related to the extent of collaborative policy activities, indicating that inter-local competition for resources impedes the development of regionalism.

The governing procedure of integration does not occur only at the regional level. Another variable can be utilized to measure the intensity of cultural and political integration at the state level.

**H2a:** The State Integration Index (SI) is positively related to the extent of collaborative policy activities.

**H2b:** The State Integration Index (SI) is negatively related to the extent of collaborative policy activities.

The same reasoning can apply at the federal level. This variable measures to what extent local municipalities are politically integrated with the policy preferences of federal governments.

**H3a:** The Federal Integration Index (FI) is positively related to the extent of collaborative policy activities.

**H3b:** The Federal Integration Index (FI) is negatively related to the extent of collaborative policy activities.

### *3.6.2.2 Structural Variables*

#### **1. Municipality Characteristics**

There are six variables that measure municipalities' endogenous structural attributes. Population and Land area represent the physical size of local municipalities, while Density provides information on the location of a given municipality within each of two regions.

The size of population variable has been employed in most local governance studies because it is believed that it has significant effects on governmental behaviors. Regarding the variances in collaboration in economic development, size of population can be thought to be both positively and negatively related to the extent of collaborative policy activities. According to the hypothesis expecting a positive relationship, when a municipality's population surpasses the optimum level, a strategy that makes use of resources located outside its jurisdiction becomes crucial. A collaborative policy is one of the probable strategies by which municipality in this situation can achieve its objectives. On the other hand, a larger population can have the effect of making a local political economy self-sustainable so that political autonomy of the jurisdiction is more valued than cooperation. In this context, the size of population is expected to be negatively related to the extent of collaborative activities. We cannot determine the direction of influence without understanding the local contexts.

**H4a:** The size of population may have a positive impact on the extent of collaborative policy activities of local municipalities.

**H4b:** The size of population may have a negative impact on the extent of collaborative policy activities of local municipalities.

The second structural variable examined is the land area of local municipalities. As shown with size of population, the land area can be both positively and negatively associated with the extent of collaboration. The hypothesis expecting the positive relationship is based on the idea that a municipality with broader territory tends to have more neighboring municipalities, which naturally generates more dyadic connections. The opposite argument is equally plausible,



in that the large jurisdiction can provide enough resources to the local community that it does not need additional resources from its neighbors.

**H5a:** The territorial land size is positively related to the extent of collaborative policy activities of local municipalities.

**H5b:** The territorial land size is negatively related to the extent of collaborative policy activities of local municipalities.

The variable of density requires a more complex explanation. This is because density is the functional expression of the interaction of population and land area. Since theoretical expectations with regards to population size and land area cannot be specified a priori, the direction of influence of density is not predicted either.

The variable of density is important because it carries basic geographical information. Where a municipality is located within a region is one piece of critical information when it comes to policy-related decisions, because location tends to be highly related to the socioeconomic characteristics of a community and its industrial interests. This is why I leave density in the model despite the high possibility of multicollinearity with the population and land area variables.

**H6a:** The density of a local municipality has a positive impact on the extent of collaborative policy activities.

**H6b:** The density of a local municipality has a negative impact on the extent of collaborative policy activities.

The number of neighboring municipalities represents the degree of structural fragmentation. Theories of regional governance used to expect a higher level of structural fragmentation to impede cross-boundary collaboration between local municipalities. For example, while Miller's MPDI index, Lewis's Fragmentation index and Rusk's measure of inelasticity are distinctive in terms of ideas and techniques in measurement, they converge on the

hypothesis expecting a negative impact of structural fragmentation on regional policy effort in the policy field of economic development.<sup>19</sup> It is therefore reasonable for this study to expect that the number of neighboring municipalities is negatively related to the extent of collaboration.

**H7:** The more neighboring municipalities there are, the less a local municipality is willing to collaborate.

Community heterogeneity measures impacts of racial diversity on the pattern of developmental policy-making. It also partly represents cultural differences between communities. Generally it is expected that as racial diversity increases, the extent of collaborative activities decreases.

**H8:** As racial diversity increases, the extent of collaborative activities of local municipalities decreases.

Finally, the regional dummy variable informs us in which region selected municipalities are located. Municipalities located in Minneapolis are coded as 1 while municipalities in Pittsburgh are coded as 0. According to theoretical expectations, the hierarchically arranged institutional structures in Minneapolis should function against collaborative policy activities.<sup>20</sup>

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<sup>19</sup> Since the structural decentralization of decision-making authority is believed to facilitate competition between local governments, jurisdictional fragmentation is recognized as an important prerequisite for efficient local governance. But no matter how pervasive this theoretical belief has been over the decades, empirical evidence supporting this polycentric model is more or less ambiguous (Prud'homme, 1995).

In addition, as societies become more and more interlinked, keeping policy independence as strictly as in the past is no longer possible, let alone recommendable. Efficiency gains from local governance seem to come more from low transaction cost rather than market-like competition (Miller, 1992; Putnam, 1993). It is now believed that a key factor producing efficiency gains is successful collective action among actors and organizations, including local governments. Thus, an effective mode of governance is expected to encourage collaborative activities between local governments. Collaboration is defined as a purposive relationship designed to solve a problem by creating or discovering a solution within a given set of constraints (Agranoff & McGuire, 2003: 4).

<sup>20</sup> According to Simon (1996), as an organizational unit is divided into functionally near-decomposable sub-units, a unit as a whole would be advantaged with efficiency gains. This theory predicts that a local government of hierarchical structure tends to invest more resources in a relationship with a higher level government than with its adjacent neighbors.

**H9:** The extent of collaboration of local municipalities in the Minneapolis region is significantly lower than that of local municipalities in the Pittsburgh region.

## 2. Economic/Fiscal Factors

The variables of community wealth, community fiscal health, and community social inequity are used to measure the diversity of economic and fiscal stresses across local governments.

The first variable in this group is related to a municipality's economic wealth. Among various measures that represent the concept of economic wealth of a given local municipality, per capita income has been selected for this study because it is the most widely used in development studies. These studies generally agree that wealthy communities are less collaborative in most policy areas, mainly because they may believe that by collaborating they are more likely to contribute than gain the necessary resources.

**H10:** The wealthier a local municipality is, the less likely it is to cooperate with its neighbors in the economic development policy process.

The second variable, community fiscal health, is closely related to the community wealth but is regarded as having an independent influence on collaboration. Per capita property tax would best represent the fiscal capacity or fiscal independence that is needed to satisfy residents' preferences as expressed by the per capita income variable. It can be postulated that local municipalities with low fiscal capacity are eager to cooperate with their neighbors.

**H11:** The less fiscally capable the local municipality is, the more it is willing to cooperate with its neighbors in the economic development policy process.

While per capita income and per capita property tax represent economic and fiscal attributes of local governments, the ratio of population under poverty level measures the economic and social inequity within each region. Like the hypothesis positing a negative relationship between community economic and fiscal capacity and inter-local collaboration, we

can easily hypothesize that affluent communities will be less likely to cooperate because they have enough resources to satisfy their own needs, while municipalities with a high percentage of poverty will be eager to find outside funds to cope with the poverty problems at hand.<sup>21</sup>

**H12:** A local municipality with a higher ratio of population under the poverty level is likely to be more cooperative than others.

### 3. Political/Governmental Institutional Factors

At least three forms of institutional infrastructures are worth being considered in inter-organizational collaboration.

First, the council-manager form of government may play a positive role in facilitating collaboration. A long-term incumbency chief administration officer in this form of government gives city managers enough time to build inter-local networks with its probable policy partners. In addition, the existence of professional managers tends to result in high managerial effectiveness and low political transition costs.

However, there exist studies positing a negative impact of this governmental form on collaboration. For example, Feiock et al (2007) argues that collaborative policy activities are more frequently adopted in local governments with a mayor-council system. According to this study, a mayor's personal interest in reelection tends to increase the propensity of collaborative policy activities because mayors tend to prefer short-term policy outcomes that are easily visible to local voters.

**H13a:** The Council-Manager form of government is likely to increase the extent of inter-organizational collaborative activities.

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<sup>21</sup> This question is rephrased whether a mode of governance influences the distributional patterns in each region. Since the benefits of economic development are always selective (Knight, 1992), conflicts with respect to the decision of 'who gets what' are inevitably embedded in political interaction between autonomous governmental units. This statement is well reflected in the proposition that the more different the planning capacities of neighboring governments are, the more difficult it is for these governments to agree on developmental objectives (Kelleher & Lowery, 2004).

**H13b:** The Mayor-Council form of government is likely to increase the extent of inter-organizational collaborative activities.

The membership of any kind of economic partnership may have significant influence on the dependent variable. It is natural to believe that the more memberships a local municipality holds, the more it is willing to collaborate inter-organizationally.

**H14:** Municipalities currently participating in economic partnerships are more likely to cooperate with other policy-related organizations.

Finally, the introduction of a performance measurement system is also believed to be related to the extent of collaboration. Although I have found no theoretical background about the influence of this system, I believe this variable partly stands for managerial professionalism and I expect it to be positively associated with the extent of collaborative activities.

**H15:** Municipalities with a formal performance measurement system are more likely to cooperate with their neighboring organizations.

<Table 3-3> summarizes the hypothesized directions of the independent variables in relation to the extent of collaborative activities among local municipalities. A +/- direction denotes that the hypothesized direction of these factors cannot be specified a priori, and also that there are multiple theories stating contradictory directions of influence. In the next chapter empirical analyses on these hypotheses will be conducted in addition to the basic descriptive analyses of each of the variables included in the explanatory model.

**Table 3-4. Summary of Hypotheses**

| <b>Factors that may influence<br/>Inter-Organizational collaboration</b> | <b>Hypothesized Direction</b> |
|--|-------------------------------|
| <b>Procedural Variables</b>  |                               |
| Regional Integration Index   | +/-                           |
| State Integration Index  | +/-                           |
| Federal Integration Index  | +/-                           |
| <b>Structural Variables</b>  |                               |
| <b>Municipality Characteristics</b>                                      |                               |
| Population   | +/-                           |
| Land Area  | +/-                           |
| Density  | +/-                           |
| Number of Neighboring Municipalities                                     | -                             |
| Community Heterogeneity  | -                             |
| Regional Dummy   | +/-                           |
| <b>Economic/Fiscal Factors</b>   |                               |
| Community Wealth   | -                             |
| Community Fiscal Health  | -                             |
| Community Social inequity  | +                             |
| <b>Political/Governmental Institution</b>                                |                               |
| Form of Government   | +/-                           |
| Economic Partnership   | +                             |
| Performance Measurement System   | +                             |

## **4.0 ANALYSES: DESCRIPTION AND EXPLANATION**

This chapter examines the causal relationship between governance structure and extent of collaboration in the two regions based on the hypotheses developed in the chapter 3. In this chapter, descriptions of the dependent and independent variables are provided first, and their meaning with respect to regionalism studies will be sought. Based on the hypothetical statements developed above, multiple tests involving models of inter-organizational collaboration will be conducted.

### **4.1 DESCRIPTIVE ANALYSIS**

#### ***4.1.1 Conducting a Survey***

One of the fundamental objectives of social science research is to find variances in a variable and to explain these variances using one or multiple causes. In the study of collaborative policy activities, the first task is to detect significant variances in the extent of collaboration across the two regions.

In a nutshell, this dissertation expects significant regional differences in the level of collaboration, which will be demonstrated by statistically different overall values for the two regions in the collaboration index. The survey conducted in the two regions will provide necessary information on the variances of the variables.

<Table 4-1> summarizes the administrative information of the survey conducted from June to August in 2007. Two rounds of conducting the survey were conducted following Dillman's Total Design Method (1978). After the first round was completed with almost a 45%

response rate the second round immediately followed. As <Table 4-1> shows, the second round brought the total response rate up to 58%.<sup>22</sup>

**Table 4-1. Summary of Survey**

| <b>Municipalities in Minneapolis and Pittsburgh Regions<br/>with 5,000 Population or more</b> |                    |                   |              |
|---|--------------------|-------------------|--------------|
|   | <b>Minneapolis</b> | <b>Pittsburgh</b> | <b>Total</b> |
| <b>Total(Collected)</b>   | 75 (45)            | 134 (76)          | 209 (121)    |
| <b>Response Rate (%)</b>  | 60                 | 57                | 58           |

#### ***4.1.2 Finding Variances in Collaboration***

The first goal of empirical analysis is to assess whether the variance in the dependent variable is significant enough to be worth studying. In this dissertation, the average values of the collaboration index in the Minneapolis and Pittsburgh regions are expected to be considerably different. To prove that the impacts from regional cultural and political institutions are the factors that influence the tendency of collaboration of local municipalities, the overall values of the collaboration index in each region should be observed first.

<Table 4-2> displays the average values of the collaboration index in the two regions. When the activities in Joint Policy Efforts (except ‘receive technical assistance’) shown in <Table 3-2> are double weighted in calculating the collaboration index, the Minneapolis and the Pittsburgh regions give average values of 19.73 and 11.95, respectively. Even without the double weighting, the values of 14.47 and 8.60 can be regarded as considerably different. These simple statistics confirm that municipalities in the Minneapolis region are more collaborative than municipalities in the Pittsburgh region.

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<sup>22</sup> One response was detected as outlier and dropped from empirical analysis.



**Table 4-2. Variances of Collaboration Index**

|                    | Collaboration Index |          |
|--------------------|---------------------|----------|
|                    | Unweighted          | Weighted |
| <b>Minneapolis</b> | 14.47               | 19.73    |
| <b>Pittsburgh</b>  | 8.60                | 11.95    |

### ***4.1.3 Procedural Variables: A Summary***

When there is a significant variance found in the dependent variable, the next step needed is to detect a meaningful covariance between the dependent variable and independent variables. Among multiple explanatory variables, I give put more emphasis on finding a significant relationship between the collaboration index and a series of procedural variables here.

Three procedural variables were defined in accordance with the levels of government. These variables, which are labeled Regional Integration Index, State Integration Index, and Federal Integration Index, measure the intensity of interaction between regional institutions and local municipalities, the state government, and the federal government, respectively.

<Table 4-3> indicates that only the Regional Integration Index (RI) would have a meaningful covariance with the Collaboration Index (CI), and demonstrates that RI is more likely to be an important cause of variances in CI. In contrast, SI and FI remain quite stable, regardless of regions.

The same weighting process could be applied to RI, SI, and FI as in the case of Collaboration index. Policy activities in the category ‘adjustment seeking’ in <Table 3-3> were weighted twice in comparison to activities in the ‘information seeking’ category. This is because as municipalities are adjusting their economic, political, and cultural interests to other levels of governance, their perception of self-interest becomes defined more collective. This mechanism eventually leads to generation of a concept of collective benefit that could satisfy even the most autonomous local political unit. This is why voluntary adjustment seeking activities should be treated differently from information-seeking policy activities.

**Table 4-3. Variances in Regional, State, and Federal Integration Indexes**

a) Unweighted

|                              | Mean  |      | Max  |      | Min |    | SD   |      |
|------------------------------|-------|------|------|------|-----|----|------|------|
|                              | MN    | PA   | MN   | PA   | MN  | PA | MN   | PA   |
| <b>Independent Variables</b> |       |      |      |      |     |    |      |      |
| Regional Integration Index   | 4.11  | 0.77 | 8.0  | 6.0  | 0   | 0  | 2.46 | 1.31 |
| State Integration Index      | 4.09  | 4.32 | 9.0  | 9.0  | 0   | 0  | 2.17 | 2.20 |
| Federal Integration Index    | 2.22  | 2.28 | 8.0  | 9.0  | 0   | 0  | 2.33 | 2.17 |
| <b>Dependent Variable</b>    |       |      |      |      |     |    |      |      |
| Collaboration Index          | 14.47 | 8.60 | 46.0 | 32.0 | 1   | 0  | 9.60 | 8.26 |

b) Weighted

|                              | Mean  |       | Max  |      | Min |    | SD    |       |
|------------------------------|-------|-------|------|------|-----|----|-------|-------|
|                              | MN    | PA    | MN   | PA   | MN  | PA | MN    | PA    |
| <b>Independent Variables</b> |       |       |      |      |     |    |       |       |
| Regional Integration Index   | 5.16  | 0.88  | 11.0 | 7.0  | 0   | 0  | 3.48  | 1.61  |
| State Integration Index      | 5.24  | 5.21  | 13.0 | 13.0 | 0   | 0  | 3.18  | 3.10  |
| Federal Integration Index    | 2.56  | 2.63  | 11.0 | 12.0 | 0   | 0  | 3.08  | 2.75  |
| <b>Dependent Variable</b>    |       |       |      |      |     |    |       |       |
| Collaboration Index          | 19.73 | 11.95 | 62.0 | 50.0 | 1   | 0  | 13.34 | 11.59 |

When these indexes are weighed, the differences between Minneapolis and Pittsburgh become more conspicuous. While the average value of RI in Pittsburgh goes up only 0.11 point (14%), RI in Minneapolis rises 1.1 point, indicating 26% increase. Even considering RI is originally significantly higher in the Minneapolis region, this phenomenon supports the observation that municipalities in Minneapolis are more strongly integrated at the regional level.

The summary of SI and FI in <Table 4-3> supports the idea that modes of governance at the regional level are important. In contrast to the fluctuations in CI and RI across regions, neither SI nor FI shows a considerable variance and both remain absolutely stable regardless of

region. This fact is reaffirmed when weights are now applied as in the case of RI. In <Table 4-3> (a), the average value for SI in Minneapolis and Pittsburgh is 4.1 and 4.3, respectively. It can be hardly said this amount of difference is significant enough to distinguish the two regions. Even after weighting, the difference between two regions remains negligible, compared to the changes in the variables of RI and CI.

The final observation from <Table 4-3> is that the frequency and intensity of interaction with Federal agencies shows the least average values and least amount of variation across regions. In fact, after weighting, the average values of FI in two regions are almost identical. This story as a whole shows that there is no covariance between two variables, which may indicate that variances in the dependent variable are not significantly related to FI,.

In sum, a descriptive analysis of CI and procedural variables tells us that the tendency of inter-organizational collaboration of local governments is significantly influenced by regional factors, no matter what the region. Moreover, it proves that only the regional level procedural variable covaries with the dependent variable. We do not know yet whether this phenomenon is in fact true, but it provides enough reason to conduct further investigation. A systemic analysis of this topic will follow including the statistical description of the structural variables in the two regions.

#### ***4.1.4 Structural Variables: A Summary***

As the discussion of the theoretical background for this dissertation has already shown, any study that exclusively examines only the procedural or only the structural perspective of governance hardly grasps the sophisticated nuisances hidden in the collaborative policy processes. Even though the descriptive summary of procedural variables might seem enough to explain variances in the extent of collaboration, structural attributes of local municipalities should not be neglected in the model of inter-organizational collaboration.

<Table 4-4> summarizes the basic statistics related to the structural variables, arranged by region to make regional differences more obvious.

**Table 4-4. Summary of Statistics of Structural Variables in the Two Regions**

|  | MEAN     |          | MAXIMUM |          | MINIMUM |          | SD       |          |
|--|----------|----------|---------|----------|---------|----------|----------|----------|
|  | MN       | PA       | MN      | PA       | MN      | PA       | MN       | PA       |
| <b>Municipality Characteristics</b>  |          |          |         |          |         |          |          |          |
| Population   | 31559.4  | 16396.63 | 382618  | 334563   | 5070    | 5145     | 56263.56 | 37215.25 |
| Land Area  | 16.40    | 15.77    | 54.89   | 91.80    | 2.24    | 0.60     | 13.72    | 17.23    |
| Density  | 2181.65  | 2547.19  | 6970.63 | 13292.86 | 187.20  | 75.96    | 1331.90  | 2610.30  |
| Number of Neighboring Municipalities   | 5.93     | 7.12     | 13      | 34       | 2       | 1        | 2.34     | 4.24     |
| Community Heterogeneity  | 7.37     | 7.53     | 32.00   | 49.40    | 1.50    | 0.40     | 6.78     | 9.67     |
| Regional Dummy   |          |          |         |          |         |          |          |          |
| <b>Economic/Fiscal Factors</b>   |          |          |         |          |         |          |          |          |
| Community Wealth   | 26692.76 | 22730.95 | 44425.0 | 80610.00 | 15513.0 | 12067.00 | 5919.92  | 9502.90  |
| Community Fiscal Health  | 290.08   | 151.85   | 519.02  | 376.99   | 147.81  | 6.70     | 87.24    | 83.48    |
| Community Social inequity  | 4.29     | 9.83     | 16.90   | 44.10    | 0.60    | 1.70     | 2.78     | 8.03     |
| <b>Political/Governmental Institution</b>  |          |          |         |          |         |          |          |          |
| Form of Government<br>Min: N= 45 (0=14, 1=31) Pit: N=76 (0=30, 1=46)             | 0.69     | 0.61     | 1       | 1        | 0       | 0        | 0.47     | 0.49     |
| Economic Partnership<br>Min: N= 45 (0=22, 1=23) Pit: N=76 (0=22, 1=54)           | 0.51     | 0.71     | 1       | 1        | 0       | 0        | 0.51     | 0.46     |
| Performance Measurement System<br>Min: N= 45 (0=27, 1=18) Pit: N=76 (0=54, 1=22) | 0.40     | 0.29     | 1       | 1        | 0       | 0        | 0.50     | 0.46     |

#### *4.1.4.1 Municipal Characteristics*

It was noted that the strategic decision on collaboration is influenced by multiple factors - it is hardly imaginable that decisions could be made regardless of each jurisdiction's economic, social, and institutional characteristics.

In terms of size of population, the municipalities in Minneapolis are about twice as big as those in Pittsburgh in general. But the populations of the central city in both regions are quite comparable. The city of Minneapolis has about 50,000 more people than the city of Pittsburgh, although the direction of population change in the two cities is opposite.<sup>23</sup> The standard deviation for each case shows that variance in population is bigger in the Minneapolis region.

The variable of land size is also quite comparable, except that diversity is more conspicuous in Pittsburgh region. This indicates that while municipalities in urban areas in the Pittsburgh region are very small in size, cities in the suburbs have wide jurisdictions.

The variable of density tells a similar story. Given the fact that the average values of density lie between 2,000 and 2,500 per square mile, a two times larger standard deviation in the Pittsburgh region is unusual. This means that in the Pittsburgh region, the structural and functional differences between urban municipalities and suburbs are clearer than in Minneapolis region. This can also be interpreted to mean that the central cities and suburbs in the Minneapolis region are more functionally integrated than the Pittsburgh region.

The number of neighboring municipalities is the central measurement for structural aspect of governance. The summary shows that the Pittsburgh region is more structurally decentralized by more than one point on average. Concerning the fact that the Pittsburgh region has three times more local municipalities, this result seems logical even though the difference in average is not as wide as expected.

The most unexpected result obtained is regarding the racial composition. The mean values of non-white population in the two regions are almost the same, 7.37 for Minneapolis and

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<sup>23</sup> The total populations in the two regions were almost the same two decades ago. The 1990 census reported that the Minneapolis region had 2,464,124 persons and Pittsburgh had a population of 2,242,798. In 2006, one and half decade later, the population in the Minneapolis region was estimated to be 3,175,041, while the size of the population in Pittsburgh had hardly changed at 2,370,776. Among the 20 biggest MSAs in the U.S., Pittsburgh is one of the two metropolitan regions which had lost some population during the last decade.

7.50 for Pittsburgh. This is surprising because the Minneapolis region is usually regarded as a racially as well as culturally homogeneous region, where the Scandinavian and Deutsche heritage is particularly strong. In contrast, the value of 7.50 in Pittsburgh is comparatively low considering the huge African American labor immigration to steel industry during the 20<sup>th</sup> century.

#### *4.1.4.2 Economic/Fiscal Factors*

Economic and fiscal attributes are as important as municipal characteristics. Three variables were selected for study, each of which measures different aspects of the economic and fiscal conditions of local governments.

In the Minneapolis region, the economic wealth measured by per capita income is about \$4,000 higher on average than that in the Pittsburgh region. This partly represents the current economic downturns of the Pittsburgh metropolis as compared to the steady economic growth of the Minneapolis region. One report states that among more than 331 metropolitan statistical areas, Minneapolis is ranked 102nd with a 5.8% average growth rate while Pittsburgh is 250<sup>th</sup> with a 4.2% rate of economic growth (Beacon Hill Institute, 2004). This observation corresponds with recent reports that describe Pittsburgh as one of the two regions that have lost their population during the last decade. In sum, it is safe to say that municipalities in the Minneapolis region are wealthier in general than municipalities in the Pittsburgh region.

More important information is provided by the standard deviation of per capita income. According to statistics, the standard deviation in the Pittsburgh region is more than 60% larger than in the Minneapolis region, which demonstrates that economic inequity is substantially more severe in Pittsburgh. With a relatively low level of per capita income, we can easily guess that economic wealth in the Pittsburgh region will continue to be unequally distributed if there is no correctional counter-measures taken or comprehensive intervention of higher level of governments.

Observations of community fiscal health represented by per capita property tax revenue reinforce this argument from a different perspective. This variable is intended to capture the fiscal capacity of local governments, and at the same time it measures the citizens' preferences on governmental roles in local governance. According to the descriptive statistics on fiscal capacity, municipalities in Minneapolis spend two times that of Pittsburgh municipalities. This

illustrates that the role of the local governments is more proactive in the Twin Cities region. It may be understandable with the moralistic cultural legacy in Minnesota, the local governments might be expected to protect the values of social justice and civic virtues.

What distinguishes the two regions most in the sub-category of Economic/Fiscal Factors is the poverty ratio or the number of persons under the poverty line. The average percentages of 4.29 in Minneapolis and 9.88 in Pittsburgh look significantly different, which shows social and economic equity is relatively well preserved in Minneapolis region. Not only the overall economic situation but also the distribution of poverty among municipalities display that the Pittsburgh region suffers from unequal resource distribution within the region. This phenomenon could be explained by the economic hardships that Pittsburgh has experienced during several decades, but we cannot rule out other possible explanations such as the strong political and economic parochialism in Pittsburgh region leads to social inequality.

#### *4.1.4.3 Political/Governmental Institutions*

The last set of variables consists of municipalities' internal institutional structures. All variables in this category are represented by the categorical and dichotomous measurement level.

In terms of forms of government, 68.9% (31/45) of sample municipalities in Minneapolis have the Council/Manager form of government, while 60.5% (46/76) of respondents in the Pittsburgh region report their governmental form as the Council/Manager system. In total, 63.6% (77/121) of the sample municipalities in both are operating under the managerial form of governing system.

The second variable, Economic Partnership, clearly distinguishes the two regions. Half (51.1%, 23/45) of Minneapolis municipalities have *voluntarily* participated in various kinds of inter-organizational partnerships. In the Pittsburgh region, more than 71% (54/76) of municipalities are engaged in economic partnership with private and non-profit organizations voluntarily. This reflects again that the historical legacy of inter-sectoral cooperation in Pittsburgh illustrated in previous studies (Ferman, 1996: Jacob, 2001: Savitch & Vogel, 1996).

The final variable measures whether municipalities have a performance measurement system. While 40% (18/45) of municipalities in the Minneapolis region report that they are equipped with any kind of performance measurement system, only 29% (22/76) of Pittsburgh municipalities measure and record their governmental performances.

#### ***4.1.5 A Summary of Variables: Integrative Model***

This simple statistical description demonstrates that the two regions are significantly different both in structural as well as procedural aspects. The summary highlights that the Pittsburgh region is more structurally decentralized than the Minneapolis region, fiscally unequal, and culturally individualistic.

Even with these differences, it is still possible to put the municipalities in the two regions into a single data set as all the variables measure the micro and internal attributes of each municipality; environmental or macro level influences are not likely to taint the information embedded in the measurements. Circumstantial or geographical information will be carried by regional dummy or procedural variables. Whether both dummy and procedural variables can be included in the explanatory model at the same time will be determined by the regression analysis and model specification process.

<Table 4-5> summarizes the results for the descriptive statistics of variables regardless of the regional location of the municipality. The dependent variable (CI) and procedural variables reflect the weights which are given to reciprocal and adjusting policy activities.



**Table 4-5. A Summary of Statistics of Variables: Integrated Data**

|   | <b>Mean</b> | <b>Max</b> | <b>Min</b> | <b>SD</b> |
|---|-------------|------------|------------|-----------|
| <b><i>Dependent Variable</i></b>          |             |            |            |           |
| Collaboration Index                       | 14.87       | 62.0       | 0          | 12.79     |
| <b><i>Independent Variables</i></b>       |             |            |            |           |
| <b>Procedural Variables</b>               |             |            |            |           |
| Regional Integration Index                | 2.48        | 11.0       | 0          | 3.23      |
| State Integration Index                   | 5.23        | 13.0       | 0          | 3.12      |
| Federal Integration Index                 | 2.60        | 12.0       | 0          | 2.87      |
| <b>Structural Variables</b>               |             |            |            |           |
| <b>Municipality Characteristics</b>       |             |            |            |           |
| Population                                | 22082.67    | 382618     | 5070       | 46183.96  |
| Land Area                                 | 16.01       | 91.80      | 0.60       | 15.94     |
| Density                                   | 2410.11     | 13292.86   | 75.96      | 2219.14   |
| Number of Neighboring Municipalities      | 6.71        | 38         | 1          | 3.94      |
| Community Heterogeneity                   | 7.47        | 49.40      | 0.40       | 8.67      |
| Regional Dummy                            | 0.37        | 1          | 0          | 0.48      |
| <b>Economic/Fiscal Factors</b>            |             |            |            |           |
| Community Wealth                          | 24216.63    | 80610.00   | 12067.00   | 8533.68   |
| Community Fiscal Health                   | 204.31      | 519.02     | 6.70       | 106.52    |
| Community Social Inequity                 | 7.75        | 44.10      | 0.60       | 7.09      |
| <b>Political/Governmental Institution</b> |             |            |            |           |
| Form of Government (0=44, 1=77)           | 0.64        | 1          | 0          | 0.48      |
| Economic Partnership (0=81, 1=40)         | 0.63        | 1          | 0          | 0.48      |
| Performance Measurement (0=44, 1=77)      | 0.33        | 1          | 0          | 0.47      |

## **4.2 EXPLAINING COLLABORATION: DETERMINANTS OF COLLABORATION**

The next step of the analysis is estimating the influence of structural and procedural variables on the extent of collaborative orientation of local municipalities in the two regions. The analysis starts with building appropriate explanatory models for each region, and in the end introduces an integrative model generalizable to other metropolitan regions in the U.S.

In specifying the integrative model, regional differences needed to be appropriately addressed. The three models were carefully tested. They are different only in respect to how regional differences are addressed. Model one has a regional dummy variable (0 = Minneapolis, 1 = Pittsburgh) while model 2 includes an RI variable instead of regional dummy. Model 3 includes both variables.

### ***4.2.1 Method of Analysis***

The extent of collaboration of local municipalities, the dependent variable for this analysis is carefully measured and recorded in this chapter as it reflects the significance of reciprocal and long-term relationships.

For the purpose of causal explanation, the most appropriate statistical method is multiple regression analysis. The possible indicators to show statistical validity such as multicollinearity and heteroscedasticity are comprehensively checked in this chapter, and the final model is determined through a model specification process.

### ***4.2.2 Data Manipulation: Satisfying the Normality Assumption***

The other important topic that is worth serious attention is how well the dependent variable satisfies the fundamental assumptions of multivariate regression analysis. One of the requirements is normal distribution of the dependent variable. While there is confusion on whether this is a ‘must’ in regression analysis, there is no doubt normal distribution of the dependent variable substantially increases both the validity and reliability of the results.

The original data of the Collaboration Index (CI) is not normally distributed. In order to correct this problem, several attempts at data transformation were made until the dataset passed the normality test.<sup>24</sup> Graphical expressions were also scrutinized. This series of descriptive analyses was reiterated using various methods of transformation. After tens of rounds, I found that taking the square root of each measurement of CI makes the dependent variable normally distributed.

**Table 4-6. Normality Test: Pittsburgh Region**

|             | Kolmogorov-Smirnov(a) |    |         |
|-------------|-----------------------|----|---------|
|             | Statistic             | Df | Sig.    |
| <b>CI2</b>  | .074                  | 75 | .200(*) |
| <b>CIW5</b> | .076                  | 75 | .200(*) |

\* This is a lower bound of the true significance.

(a) Lilliefors Significance Correction

CI2 and CIW5 stand for unweighted and weighted Collaboration Index, respectively. Both are interval variables, in which differences between the values of the intervals are equally spaced.

SPSS provides two kinds of normality tests - the Kolmogotov-Smirnov test and the Shapiro-Wilk test. Due to the inherent limitations in each test, it is necessary to get results that pass both tests at the same time. Fortunately the results for these tests, displayed in <Table 4-6>, show that both variables are normally distributed.

The same procedure was applied to the case of the Minneapolis region and the integrated dataset consisting of all the observations in both regions. The normality tests for each case are summarized below.

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<sup>24</sup> Transformations are a remedy for outliers, failures of normality, linearity, and homoscedasticity.

**Table 4-7. Normality Test: Minneapolis Region**

|             | Shapiro-Wilk |    |      |
|-------------|--------------|----|------|
|             | Statistic    | df | Sig. |
| <b>CI2</b>  | .976         | 45 | .465 |
| <b>CIW5</b> | .981         | 45 | .642 |

\* This is a lower bound of the true significance.  
(a) Lilliefors Significance Correction

**Table 4-8. Normality Test: Integrated Data**

|             | Kolmogorov-Smirnov(a) |     |         |
|-------------|-----------------------|-----|---------|
|             | Statistic             | Df  | Sig.    |
| <b>CI2</b>  | .049                  | 120 | .200(*) |
| <b>CIW5</b> | .047                  | 120 | .200(*) |

\* This is a lower bound of the true significance.  
(a) Lilliefors Significance Correction

Now with the transformed data in hand, we can finally move forward to the step of explanatory analyses. It starts with a question of ‘what determines inter-organizational collaboration in Pittsburgh region.

#### **4.2.3 Findings: Collaboration in the Pittsburgh Region**

Although notorious for its hyper-structural fragmentation, the Pittsburgh region has been acknowledged as a cooperative metropolitan area. This section raises the question of how cooperation is possible in this context of severe structural fragmentation. Also, it attempts to find the factors that encourage the collaborative activities of local municipalities in this region.

<Table 4-9> summarizes the statistical significances of the regression models and regression coefficients of each variable in the context of the Pittsburgh region. Overall, the significance is slightly higher when weighted data was used.

Among the procedural variables, only the state integration index (SI) appears to be highly significant, while the extent of interactions with federal agents (FI) does not seem to explain the tendency of municipal decision-making towards collaborative activities. It demonstrates that municipalities with a close relationship with state government agencies are more active in

horizontal cooperation as well. It challenges the theory of near-decomposability, which claims a negative relationship between vertical cooperation and inter-organizational cooperation.

In the variables for structural factors, all variables of political/governmental institutions are highly significant. The dummy variable for the form of government seems to be most significant. In both models, the council-manager form of government increases the level of inter-organizational collaboration to a great extent.

Another significant structural variable is Economic Partnership. In this analysis, if a municipality holds a membership in existing economic partnership organizations, its tendency towards inter-organizational collaboration increases considerably. In other words, municipalities with economic partnerships tend to be more cooperative cross-jurisdictionally by .934 (Unweighted) or 0.942 (Weighted) points<sup>25</sup> than municipalities without any economic partnership.

The variable of performance measurement system is positively associated with collaboration as well. Information on governmental performances encourages managers to evaluate their past experiences. If they are not satisfied with the current situation, they are likely to adopt innovative policy alternatives. If we correctly acknowledge that the collaborative approach to economic development has emerged as a likely policy option for municipal managers, we can see the relationship between two variables easily.

When it comes to the analysis of each variable's significance, the two differences between the models are the variables of regional integration index and community social inequity. Given that the interactions between local governments and regional institutions (SPC) are not strong, we would not expect policy integration at the regional level to play as central a role in inter-organizational collaboration as state level policy integration. However, although not significant in both models, it is still an important finding that policy preferences shared at the regional level are in fact influential in explaining the extent of collaboration of local municipalities.

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<sup>25</sup> This values results from the function of square root of original values.

**Table 4-9. Factors Explaining the Extent of Collaboration in the Pittsburgh Region**

|   | Unweighted (1) | Weighted (2)    |
|---|----------------|-----------------|
| <b>Procedural Variables</b>               |                |                 |
| Regional Integration Index                | .061 (.138)*   | .065 (.122)     |
| State Integration Index                   | .292 (.100)**  | .295 (.075)***  |
| Federal Integration Index                 | -.020 (.098)   | -.051 (.078)    |
| <b>Structural Variables</b>               |                |                 |
| <b>Municipality Characteristics</b>       |                |                 |
| Population (1/1000)                       | .010 (.007)    | .011 (.008)     |
| Land Area                                 | .003 (.012)    | .004 (.013)     |
| Density                                   | .000 (.000)    | .000 (.000)     |
| Number of Neighboring Municipalities      | -.048 (.067)   | -.075 (.078)    |
| Community Heterogeneity                   | -.016(.020)    | -.031 (.023)    |
| Regional Dummy                            | N/A            | N/A             |
| <b>Economic/Fiscal Factors</b>            |                |                 |
| Community Wealth                          | .000 (.000)    | .000 (.000)     |
| Community Fiscal Health                   | -.003 (.002)   | .000 (.003)     |
| Community Social Inequity                 | .029 (.028)    | .057 (.033)*    |
| <b>Political/Governmental Institution</b> |                |                 |
| Form of Government                        | .881 (.299)*** | 1.029 (.343)*** |
| Economic Partnership                      | .934 (.338)*** | .942 (.390)**   |
| Performance Measurement                   | .595 (.341)*   | .791 (.376)**   |
| <b>Constant</b>                           | -.281 (.842)   | -.294 (.941)    |
| <b>R-Square</b>                           | .578           | .598            |
| <b>Adjusted R-Square</b>                  | .479           | .504            |
| <b>F</b>                                  | 5.865***       | 6.365***        |

Note: Standard Error in parenthesis. \*\*\*p<.01, \*\*p<.05, \*p<.10; two-tailed test.

In sum, we can safely say that in the context of hyper-fragmentation as in Pittsburgh, municipalities with active relationships with the state government tend to collaborate more with their neighbors. In addition, the council-manager form of government and the membership of

economic partnership exert positive influences and the performance measurement system plays a moderate role in fostering inter-organizational collaboration.

#### ***4.2.4 Collaboration in the Minneapolis Region***

This section investigates how the same variables are differently associated in the Minneapolis region. The same statistical analysis as above was conducted using the method of multivariate regression analysis. The results are reported in <Table 4-10>.

While still statistically significant, the overall significance of models of collaboration in the Minneapolis region do not hold as strong as in the case of the Pittsburgh region. Only membership in an economic partnership and RI and membership in an economic partnership (Weighted model) appear to be statically significant. Here it should be clarified that this result does not mean overall level of collaboration is lower in the Minneapolis region. As summarized <Table 4-3>, municipalities in the Minneapolis region are much more cooperative on average than municipalities in the Pittsburgh region. We can infer from <Table 4-10> that inter-organizational or cross-boundary collaboration in Minneapolis is less influenced by either structural attributes or the frequencies of relations with higher level governments. It could be better interpreted that, in comparison to the Pittsburgh case, since the relationships among municipalities in the Minneapolis region are more formally regulated, the variables included in these models are less likely to determine the extent of collaborative activities.

**Table 4-10. Factors Explaining the Extent of Collaboration in the Minneapolis Region**

|   | Unweighted (1) | Weighted (2)  |
|---|----------------|---------------|
| <b>Procedural Variables</b>               |                |               |
| Regional Integration Index                | .129 (.080)    | .119 (.068)*  |
| State Integration Index                   | .164 (.100)    | .115 (.082)   |
| Federal Integration Index                 | -.038 (.094)   | .018 (.086)   |
| <b>Structural Variables</b>               |                |               |
| <b>Municipality Characteristics</b>       |                |               |
| Population (1/1000)                       | .013 (.009)    | .015 (.011)   |
| Land Area                                 | -.029 (.028)   | -.038 (.034)  |
| Density                                   | .000 (.000)    | .000 (.000)   |
| Number of Neighboring Municipalities      | -.070 (.098)   | -.079 (.120)  |
| Community Heterogeneity                   | .030 (.038)    | .037 (.047)   |
| Regional Dummy                            | N/A            | N/A           |
| <b>Economic/Fiscal Factors</b>            |                |               |
| Community Wealth                          | .000 (.000)    | .000 (.000)   |
| Community Fiscal Health                   | -.001 (.002)   | -.001 (.003)  |
| Community Social Inequity                 | -.020 (.131)   | -.043 (.162)  |
| <b>Political/Governmental Institution</b> |                |               |
| Form of Government                        | .371 (.382)    | .395 (.468)   |
| Economic Partnership                      | .911 (.371)**  | .956 (.457)** |
| Performance Measurement                   | -.021 (.372)   | .012 (.458)   |
| <b>Constant</b>                           | .374 (.680)    | 2.819 (2.202) |
| <b>R-Square</b>                           | .579           | .560          |
| <b>Adjusted R-Square</b>                  | .383           | .355          |
| <b>F</b>                                  | 2.948***       | 2.726***      |

Note: Standard Error in parenthesis. \*\*\*p<.01, \*\*p<.05, \*p<.10; two-tailed test.



#### ***4.2.5 Findings: A Model of Collaboration – Unweighted***

The next empirical question is whether the effectiveness of the proposed model could hold regardless of the metropolitan region it is applied to. The data on each region is now combined and the same statistical method is applied.

Three models of collaboration are summarized in <Table 4-11>. The first model is introduced to capture the differences that the regional factor makes on the results for extent of collaboration. The variable of regional dummy is significant at the 0.01 level, and based on this information we can predict that, other things being equal, municipalities in the Minneapolis region tend to collaborate more than municipalities in the Pittsburgh region. The size of population, State integration index (SI), the form of government, and membership in an economic partnership are also positively related to the collaboration index (CI).

The second model substitutes a regional dummy for the Regional Integration Index (RI). Whereas the regional dummy captures all the unspecified factors hidden in a regional context, RI measures the intensity of cultural and political integration of municipalities to regional level of governance. In other words, while a regional dummy measures the uncontrollable, external, and macro level influences on local decisions, RI represents the way these exogenous factors interact with endogenous characteristics of local governments. We may expect to distinguish strategically active local municipalities from inactive ones by scrutinizing the patterns of distribution of these indexes. According to Agranoff & McGuire (2003), some municipalities are more able to get what they want by making use of various local connections and being actively involved with regional and state level policy problems. They call this type of governance jurisdictional-based management, as each local jurisdiction is able to maximize individual benefits.

The second model also clearly shows interactions with regional and state agencies are positively associated with level of collaboration. Unlike the theoretical expectation, this indicates that political and cultural integration at regional and state levels facilitates local governments development of the concept of shared interest.

Size of population, form of government, and membership in economic partnerships are positively related to the collaboration index (CI) as well. The big change from the first model is the variable of number of neighboring municipalities becomes significant, with a negative impact

on collaboration. This means that structural fragmentation impedes inter-local cooperation on economic development.

**Table 4-11. Factors Explaining the Extent of Collaboration – Unweighted case**

|   | With Regional<br>Dummy | With Regional<br>Integration Index | With Both      |
|---|------------------------|------------------------------------|----------------|
| <b>Procedural Variables</b>               |                        |                                    |                |
| Regional                                  | N/A                    | .209 (.052)***                     | .106 (.066)    |
| State                                     | .258 (.063)***         | .195 (.065)***                     | .227 (.065)*** |
| Federal                                   | .015 (.064)            | .000 (.065)                        | .008 (.063)    |
| <b>Structural Variables</b>               |                        |                                    |                |
| <b>Municipality Characteristics</b>       |                        |                                    |                |
| Population                                | .007 (.004)*           | .007 (.004)*                       | .006 (.004)*   |
| Land Area                                 | .001 (.009)            | .003 (.009)                        | .001 (.009)    |
| Density                                   | .000 (.000)            | .000 (.000)                        | .000 (.000)    |
| Number of Neighboring Municipalities      | -.024 (.039)           | -.065 (.037)*                      | -.033 (.039)   |
| Community Heterogeneity                   | -.013 (.016)           | .000 (.017)                        | -.008 (.017)   |
| Regional Dummy                            | 1.306 (.292)***        | N/A                                | .912 (.379)**  |
| <b>Economic/Fiscal Factors</b>            |                        |                                    |                |
| Community Wealth                          | .000 (.000)            | .000 (.000)                        | .000 (.000)    |
| Community Fiscal Health                   | -.001 (.001)           | .000 (.001)                        | -.001 (.001)   |
| Community Social Inequity                 | .029 (.024)            | .009 (.023)                        | .024 (.024)    |
| <b>Political/Governmental Institution</b> |                        |                                    |                |
| Form of Government                        | .712 (.225)***         | .705 (.229)***                     | .689 (.224)*** |
| Economic Partnership                      | .787 (.241)***         | .751 (.244)***                     | .772 (.239)*** |
| Performance Measurement                   | .370 (.232)            | .294 (.236)                        | .325 (.232)    |
| <b>Constant</b>                           | -.157 (.643)           | -.523 (.638)                       | .062 (.652)    |
| <b>R-Square</b>                           | .534                   | .548                               | .572           |
| <b>Adjusted R-Square</b>                  | .503                   | .488                               | .511           |
| <b>F</b>                                  | 9.610***               | 9.111***                           | 9.276***       |

Note: Standard Error in parenthesis. \*\*\*p<.01, \*\*p<.05, \*p<.10; two-tailed test.

In the final model, in which both variables are included, the regression coefficient of the regional dummy variable dramatically changes, as does its significance. RI becomes insignificant while the regional dummy maintains its explanatory power. This may indicate that the two variables are closely related, even though multicollinearity does not exist. Other than that, the third model is similar to the first, with the exception that the overall goodness of fit is slightly decreased.

Overall, the three models of inter-organizational collaboration determine the factors that are effective in explaining variances in the dependent variable. We can enhance the validity of the conclusion by conducting another set of analyses using a weighted dataset.

#### ***4.2.6 Findings: A Model of Collaboration – Weighted***

As mentioned above, some of the policy activities deserve more weight by virtues of their longevity and reciprocity. This idea was reflected in the data manipulation procedure, which generated completely new datasets.

The methodological advantages of ‘Multiplism’ support this data manipulation. The results from this analysis of the weighted dataset can be compared to the results in the previous section, and conclusions drawn from comparison of the two may be more solid and comprehensive than a one-shot analysis.

<Table 4-12> reports estimates of regression coefficients from multivariate regression analysis. The first model does not include RI and measures regional differences using a regional dummy variable. This dummy variable predicts that municipalities in the Minneapolis region tend to collaborate inter-organizationally substantially more than municipalities in the Pittsburgh region. It also predicts that the more interactive with state agencies local governments are, the more horizontally collaborative they are.

Regarding the structural variables, like the analysis built upon the unweighted data, the variables of social inequity, form of government, membership in economic partnerships, and performance measurement system are statistically significant in explaining collaboration. In the weighted model being examined here, other things being equal, municipalities with a council/manager form of government tend to collaborate more, which in turn legitimizes the idea of professional managerialism again. Likewise, we can claim that municipalities that already

have joined in any kind of inter-organizational economic development network are considerably more collaborative than others.

**Table 4-12. Factors Explaining the Extent of Collaboration – Weighted Case**

|   | With Regional<br>Dummy | With Regional<br>Integration Index | With Both      |
|---|------------------------|------------------------------------|----------------|
| <b>Procedural Variables</b>               |                        |                                    |                |
| Regional                                  | N/A                    | .152 (.045)***                     | .085 (.056)    |
| State                                     | .240 (.050)***         | .206 (.052)***                     | .219 (.052)*** |
| Federal                                   | .013 (.057)            | -.001 (.057)                       | .006 (.057)    |
| <b>Structural Variables</b>               |                        |                                    |                |
| <b>Municipality Characteristics</b>       |                        |                                    |                |
| Population                                | .008 (.005)            | .008 (.005)*                       | .007 (.005)    |
| Land Area                                 | -.001 (.011)           | .000 (.011)                        | -.001 (.011)   |
| Density                                   | .000 (.000)            | .000 (.000)                        | .000 (.000)    |
| Number of Neighboring Municipalities      | -.042 (.045)           | -.085 (.043)*                      | -.052 (.045)   |
| Community Heterogeneity                   | -.026 (.019)           | -.015 (.019)                       | -.022 (.019)   |
| Regional Dummy                            | 1.236 (.342)***        | N/A                                | .851 (.423)**  |
| <b>Economic/Fiscal Factors</b>            |                        |                                    |                |
| Community Wealth                          | .000 (.000)            | .000 (.001)                        | .000 (.000)    |
| Community Fiscal Health                   | .000 (.002)            | .002 (.108)                        | .000 (.002)    |
| Community Social Inequity                 | .051 (.028)*           | .033 (.027)                        | .047 (.028)*   |
| <b>Political/Governmental Institution</b> |                        |                                    |                |
| Form of Government                        | .866 (.264)***         | .867 (.267)***                     | .846 (.263)*** |
| Economic Partnership                      | .816 (.285)***         | .783 (.287)***                     | .800 (.283)*** |
| Performance Measurement                   | .482 (.271)*           | .361 (.276)                        | .409 (.273)    |
| <b>Constant</b>                           | .051 (.737)            | .654 (.728)                        | .253 (.744)    |
| <b>R-Square</b>                           | .565                   | .558                               | .575           |
| <b>Adjusted R-Square</b>                  | .507                   | .499                               | .514           |
| <b>F</b>                                  | 9.754***               | 9.482***                           | 9.376***       |

Note: Standard Error in parenthesis. \*\*\*p<.01, \*\*p<.05, \*p<.10; two-tailed test.

What is new in the first model of <Table 4-12> is that one variable becomes statistically significant which was not in any of previous analyses. The variable of community social inequity turns becomes significant, which verifies the ‘need’ hypothesis.

The second model, which substituted a dummy variable for RI, also reports very similar results. Municipalities with more active interactions with regional and state agencies are likely to be more horizontally collaborative, as with the municipalities with the variables of economic partnership, the forms of government, and the size of population. The variable of social inequity becomes insignificant again here, while the number of neighboring municipalities begins to display its significance as an explanatory variable. In particular, the negative direction of the variable of number of neighbors confirms the theoretical expectation of the negative relationship between structural fragmentation and propensity towards collaboration.

The final model confirms the statement again that a regional dummy and RI cannot be included simultaneously in one model. When both are included, the overall significance goes slightly down compared to both the first and the second model, while R square remains stable at a significant level.

Along with the three models that used unweighted data, the results reported in <Table 4-12> demonstrate that some variables show consistent significance, regardless of model. In procedural variables, the state integration index (SI) is the most dependable explanatory variable. The regional integration index (RI) seems to be fairly significant only when we combine regional data into one integrated dataset. This means that the intensity of policy integration at the regional level becomes significant when the comparison of metropolitan regions is at issue. While a regional dummy variable is able to present the undetermined differences in regional contexts, RI specifies the factor that actually causes the level of collaborative activities.

With respect to structural variables, the significance of political and governmental factors is conspicuous. This may indicate that local governments decide whether to collaborate or not based on the existence of institutional infrastructures that permit collaboration, rather than based on strategic calculation of future benefits from collaboration. I could say that this result confirms the logic of appropriateness as the rationale of action in local context.

Structural fragmentation does not seem to have a strong influence in any cases, but its value as an explanatory variable is still appreciable. The social need hypothesis is also fairly

relevant in some cases. But economic and fiscal abilities are not associated with level of collaboration.

### 4.3 CONCLUSION

In <Table 3-3> I summarized the hypothesized directions of each variable. Some of them were relatively easy to predict given the theoretical clarity or wealth of previous research, while others remained undecided until empirical analyses could determine the direction.

<Table 4-13> compares the hypothesized directions and the estimates of directions provided by the series of empirical analyses completed for this study. Some of the variables prove that the proposed hypotheses were in fact empirically correct, and others specified the direction of influences which could not be hypothesized a priori. Variables in the gray cells are proven to be significant, and variables in the denser gray cells indicate those variables are consistently significant regardless of models.

The most clear-cut conclusion we can draw is that the intensity of policy integration of local municipalities at the regional and state level are in fact the most effective in explaining variance in collaborative activities. This result is quite contrary to the near-decomposability theorem and the polycentric perspective on regional governance. First, this result shows that the effectiveness of a near-decomposable system would be quite exaggerated in a metropolitan context. The proposition of vertical integration of hierarchy still seems meaningful in some aspects because it actually supports horizontal interactions among subunits of governance system.

The polycentric perspective also predicts a negative relationship between collective political and cultural integration and the extent of collaboration. In an aggregated mode of governance, local municipalities are apt to interact with higher level governmental organizations in order to win in the game of resource allocation. Theoretically there is no need for them to cooperate with their neighbors in this competition. But again, this theorem does not hold true.

**Table 4-13. A Summary of Hypotheses and Results of Empirical Analyses**

| <b>Factors that influence Inter-organizational collaboration</b> | <b>Hypothesized Direction</b> | <b>Direction at Work</b> |
|--|-------------------------------|--------------------------|
| <b>Procedural Variables</b>                                      |                               |                          |
| Regional Integration Index                                       | +/-                           | +                        |
| State Integration Index  | +/-                           | +                        |
| Federal Integration Index  | +/-                           | N/A                      |
| <b>Structural Variables</b>                                      |                               |                          |
| <b>Municipality Characteristics</b>                              |                               |                          |
| Population   | +/-                           | +                        |
| Land Area  | +/-                           | N/A                      |
| Density  | +/-                           | N/A                      |
| Number of Neighboring Municipalities                             | -                             | -                        |
| Community Heterogeneity  | -                             | N/A                      |
| Regional Dummy   | +/-                           | +                        |
| <b>Economic/Fiscal Factors</b>                                   |                               |                          |
| Community Wealth   | -                             | N/A                      |
| Community Fiscal Health  | -                             | N/A                      |
| Community Social inequity  | +                             | +                        |
| <b>Political/Governmental Institution</b>                        |                               |                          |
| Form of Government   | +/-                           | +                        |
| Economic Partnership   | +                             | +                        |
| Performance Measurement System                                   | +                             | +                        |

When the issue of regional comparison comes forward, the regional dummy variable becomes especially important. As mentioned, this variable does not specify the factors that create differences in the level of collaboration. At this point, it is enough to say that local municipalities in the Minneapolis region are more collaborative in their economic development policy process. If this study includes more cases in the future, the importance of the dummy will be more obvious.

Two other structural variables look significant. Size of population is positively associated with the collaborative index, which means local governments with a larger population, which

need more resources from outside their jurisdiction, are more likely to work inter-organizationally to make use of neighbors' resources.

The variable of number of neighboring municipalities represents the structural perspective on local and regional governance. Although it is not always statistically significant in all cases, its influence on collaboration is undeniable as the number of neighboring local governments increases the transaction costs of dealing with relational complexity increase substantially.

Economic and fiscal factors were shown to be generally insignificant. This does not necessarily mean economic factors are not considered in local decision-making. But in my analysis, only the variable of social inequity shows a moderate influence in some cases. The argument that expects a negative relationship between local wealth and collaboration seems irrelevant, as does the case of between local fiscal capacity and collaboration. Municipalities may not pursue cooperation unless they have to deal with 'real' poverty problems.

Political and governmental institutions are critically important except for the variable of performance measurement system. The influence of governmental form could not be pre-specified in chapter 3, as each of the different theories had solid reasoning for opposing positions. But empirical analysis clearly determines the direction of the influence. According to the results, the council-manager form of government definitely increases the extent of collaboration. It also supports the necessity for professional managerialism.

Membership in economic partnerships is proven significant as well. Local governments do not exclusively interact among themselves. There are countless strong and weak ties between public, non-profit, and private organizations. Although local municipalities play an important role in every economic development policy effort, they cannot accomplish a high rate of growth without sufficient input from other sectors. Voluntary participation in economic development consortia is a good strategy to build a smooth relationship with various organizations. Thus, it is natural to assume that the more participatory a local municipality is, the more collaborative it is with its neighbors.

As expected, this variable is strongly associated with the extent of collaboration and plays a positive role in increasing cross-boundary collaboration. We can therefore argue that if a municipality has a legacy of cooperation, it definitely impacts decisions on economic development strategies.



Finally, the performance measurement system is sometimes a significant factor in fostering inter-organizational collaboration, most likely because this kind of system can provide credible information about governmental performances which municipal managers can use to improve strategies. The decision whether or not to pursue collaboration cannot be determined by a single or a couple of factors. Collaborative policy activities are the outcomes of complex interaction between a number of factors, including structural and procedural variables. It can be understood neither as a transaction cost saving strategy nor as simple compliance with institutional rules. I would argue it is a little bit of both. The next analysis addresses how these factors are interrelated to one another and how regional contexts structure these relations in different ways.

## **5.0 LINKAGES, CLUSTERS, AND NETWORKS IN THE ECONOMIC DEVELOPMENT POLICY PROCESS**

Previous chapters have answered the fundamental question of this dissertation: What factors determine the extent of inter-organizational collaboration? Based on the answers provided in the last chapter, I will conduct another set of analyses on the economic development policy process, compare the mechanism of policy dynamics, and present how policy actors in the two regions of Minneapolis and Pittsburgh actually communicate, interact, and cooperate. The two regions seem to be different not only in extent of collaboration but with respect to patterns of interactions as well.

The last chapter ends with a conclusion that suggests political and cultural integration at regional and state levels facilitates inter-organizational collaboration in the economic development policy process. Among the multiple significant explanatory variables, I singled out two variables that reflect regional variances in the extent of collaboration. Those were the Regional Integration Index (RI) and the regional dummy variable. Although these two variables could not be included in the model at the same time, there is still significant variance in the level of collaboration between the two metropolitan regions.

Now the question is ‘how’ they are different. More specifically, this chapter focuses on how the relationships among various organizations are differently structured for a wide range of collaborative policy activities. This analysis can fill the knowledge gap that the main conclusion of the last chapter leaves open.

First, this chapter aims to identify the main actors in the economic development policy process. Although the previous analyses generated important knowledge on determinants of collaboration, we are still unaware of the roles performed by participants in economic development other than local municipalities. The concepts of actor and activity centrality make it easier to define most active actors in each region.

Second, this study asks which network actors play an active role in providing connections to other participants. Actors involved in economic development policies can increase their benefits not only by independently pursuing their interests, but also by providing other participants with relevant information such as locations of resources. We can define this type of participant as a network entrepreneur and will identify who occupies this position in the metropolitan regions of Minneapolis and Pittsburgh.

Finally, understanding the patterns of relationships is also important. This study employs the clustering method, where the three most active players are grouped in each of ten particular policy activities, to find out who participates in which policy activities and how the collaboration is organized.

This chapter does not offer a formal network analysis per se but will provide important information on how economic development policies are differently shaped in each region.

## **5.1 THE RESEARCH METHOD FOR NETWORK ANALYSIS**

### ***5.1.1 Collaboration in the Network***

A network as a structural form of governance was briefly discussed in chapter two. Its emergence in public and urban administration coincides with the transformation of the paradigm of public administration from government to governance. A simultaneous change in power relations and increasing complexity of social problems necessitates the more flexible organizational form of governance, which is defined as a networked society. In a network society, hierarchical control is replaced by continuing processes of bargaining among interested parties within most fields of public administration (Bogason & Toonen, 1998: 205).

The theme of collaboration is closely related to network structures conceptually as well as practically. First, collaboration is often addressed as a key managerial strategy in a networked society. Given a lack of rules and standard procedures, actors in network organizations have to figure out how to pursue collective benefits that cannot be achieved by individual efforts. Participation in any form of joint activity can be defined as a collaborative strategy.

Collaboration as a policy strategy is valued more in the context of inter-sectoral relations. Governments' weakened ability to control social actors has well been observed and documented. A metaphor such as 'hollow state (Milward & Provan, 2000a: 2000b)',<sup>26</sup> describes the fact that policy decisions can no longer be made exclusively by governmental organizations. As resources are more widely distributed across the social sector, so is the authority to control their use. Without formal authority to monitor, command, and control, hierarchical relations have no means to sustain structural integrity. As a result, network structures are especially conspicuous in cross-sector relationships, and collaboration through the form of a network is expected to benefit all participants, regardless of where they are from.

But despite the increased interest in network structures, its usefulness in policy-related researches has still not been adequately explored. This is partly because there is no systemized model explaining how a network may be structured or who is involved in which kinds of network arrangements. This lack of clarity in articulation perhaps reflects an uneasiness with a system of coordination that does not allow for clear management either by a hierarchy or by the market (Kickert, Klijn, and Loppenjan, 1997). This dissertation does not claim that it can provide a complete set of theories of network or that its conclusions can be generalized into other contexts without modification. What this dissertation delivers might be a small part of the whole picture, but it can empirically describe the relationship between modes of governance and the patterns of collaboration in the field of economic development.

### ***5.1.2 Modal Approach Revisited***

The modal approach to regional governance is creatively reinterpreted in this chapter. While the empirical analysis on extent of collaborative activities provides information about factors determining inter-organizational collaboration, the empirical endeavor of this chapter centers on the structural arrangement of inter-organizational networks which have emerged from local and regional economic development in the regions of Minneapolis and Pittsburgh.

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<sup>26</sup> It originally refers to the current fashion of contracting out government services to networks of largely nonprofit organizations (with some private firms included) (Milward & Provan, 2000b: 362).

In a mode of cooperation, we may expect inter-sectoral collaboration is the dominant form of development policy activity. In a context lacking any authoritative regional institution, actors in this mode are not expected to voluntarily give up their interests in order to pursue relatively ambiguous and uncertain collective objectives. As Feiock et al (2007) succinctly puts it, local governments are likely to seek collaboration only when the transaction cost from interactions with other actors does not exceed the perceived benefits of the collaboration. For example, since interaction with private sector organizations may bring competition into service provision, a local government would benefit from the cost-saving mechanism of market competition. This is why we can expect to observe more inter-sectoral collaboration in the cooperative mode of governance.

In contrast, organizations in the mode of coordination are more likely to be influenced by formal and informal regulations. Collaboration is explained as a standardized course of action regardless of whether it will benefit participants in collaboration in the future. In this sense, collaboration would be more intra-sectoral. Of course it does not necessarily mean inter-sectoral collaboration is absent in a coordinative mode of governance. This argument is only valid only in comparison with the case of mode of cooperation.

### ***5.1.3 Basic Concepts of Network Analysis***

#### ***5.1.3.1 Linkage***

The basic unit of analysis in this chapter is the collaborative ‘linkages’ through which local municipalities collaborate on economic development policy activities with other organizations. Methodologically, the basic building block of any network study is the linkage among the organizations that make up the network (Provan & Milward, 1995). Linkage is defined as any type of tie between two individual organizations regardless of its strength, stability, and durability. There are a variety of units of analyses in a formal network analysis. This dissertation employs two units of analyses, each of which consist of dyadic (one) and triad (two) linkages as elementary structural features. Additionally, although diversity in the characteristics of a linkage can cause methodological complexities in the measurement process, for this study, it is not an issue because the relational data obtained from municipal managers is not comprehensive enough to support rigorous network analysis.

#### *5.1.3.2 Density*

Density in network analysis usually refers to the ratio of the number of observed relations to the potential number (Knoke, 1990: 237). Density in this study measures the degree to which the municipality links with each of the players. It is thus a type of multiplexity measure for each player, representing the mean number of linkages per player for each municipality reporting collaboration with that player (Agranoff & McGuire, 2003: 115).

#### *5.1.3.3 Centrality*

Network centrality refers to the importance or prominence of actors. Wasserman & Faust (1994) specifies centrality as being based on degree, closeness, betweenness, and information. It is also measured by the differential status or rank of the actors.

The theoretical background of centrality is nicely put by Hanneman & Riddle (2005):

“Actors who have more ties to other actors may be advantaged positions. Because they have many ties, they may have alternative ways to satisfy needs, and hence are less dependent on other individuals. Because they have many ties, they may have access to, and be able to call on more of the resources of the network as a whole. Because they have many ties, they are often third-parties and deal makers in exchanges among others, and are able to benefit from this brokerage. So, a very simple, but often very effective measure of an actor's centrality and power potential is their degree.”

From the structural point of view, the meaning of network centrality is often regarded as related to the concept of ‘structural hole.’ According to this conceptualization, actors can build relationships with multiple disconnected clusters and use these connections to obtain information and gain advantages over others (Burt, 1992). Thus positioning in the network comes to have strategic value in advancing local interests.

However, this dissertation does not adopt the structural perspective in its network analysis. Instead it employs the two measures of actor centrality and activity centrality, which capture the relative importance of particular actors and each collaborative policy activities in economic development policy process.

## **5.2 PATTERNS OF COLLABORATION IN THE TWO REGIONS**

This section identifies the most active actors in collaborative policy activities and examines the extent to which each actor is involved in each policy activity. Here we can take advantage of theoretical expectations on the pattern of collaboration that the modal approach to governance provides.

### ***5.2.1 Participants in a Comprehensive Economic Development Plan***

#### ***5.2.1.1 Definition of Participants***

Participants or Actors in collaborative networks are broadly defined in this study, and refers to the ‘types’ of organizations. For example, there are numerous local governments with whom one municipality is interacting. Although network ties can be drawn between a sample municipality and its partner cities, these are counted as one in my relational data. Since the main purpose of this study is to delineate patterns of relationships across social sectors, measuring the strength of networks or identifying a particular network entrepreneur is only of secondary interest.

The types of organizations and their definitions are given as below:

City (CT): Any type of local government you are in contact with, regardless of its distance from your jurisdiction.

County government (CO): All organizations belonging to State governments, e.g. County’s Department of Economic Development, State Legislatures, Governor’s Office, etc.

Special District (SD): A governmental organization which provides specialized services only to those persons who live within specified boundaries.

Public/Private Partnership (PPP): A formal or informal relationship between local governments and Private organizations for joint pursuit of local economic growth.

Chamber of Commerce (CC): A private voluntary business network which aims to improve the business climate in a locality, typically through business networking, lobbying, common projects and a selection of business services.

Planning Consortia (PC): An association consisting of organizations from the public,

private, and non-profit sectors which primarily collaborates to develop local comprehensive development plans.

Economic Development Corporation (EDC): A non-profit organization whose mission is to promote economic development within a specific geographical area.

Neighborhood Association (NA): A voluntary, non-profit organization which represents civic values or a certain type of development interests.

Councils of Governments (CG): A voluntary, multi-service entity with state and locally-defined boundaries that delivers a variety of federal, state and local programs while continuing its function as a planning organization, technical assistance provider and “visionary” to its member local governments.

Regional Institution (RI): A metropolitan planning organization (MPO).

A transportation policy-making organization made up of representatives from a local government and transportation authorities.

State government (ST): All organizations belonging to State governments, e.g.

State’s Department of Economic Development, State Legislatures, and Governor’s Office, etc.

Federal Government (FD): All organizations belonging to Federal governments.

e.g. Department of Economic Development, Department of Housing and Urban Development, Environmental Protection Agency, Congressmen or Senators’ Offices, etc.

#### *5.2.1.2 Frequency Analysis: Who Participates Most?*

Preparing an economic development plan is one of the most important policy activities of local municipalities. A comprehensive development plan is often required by state law, and it should contain each municipality’s fundamental concepts, objectives, and specific strategies for economic development. Municipalities seldom develop their plans in isolation. Various stakeholders are involved in the planning process and undoubtedly do everything they can to ensure that these plans are written in their favor. Likewise, municipalities are more likely to cooperate with actors whose resources are crucial for their development objectives.



**Table 5-1. Frequency Distribution of Participants in Comprehensive Plan Development: Minneapolis**

|              | R1        |             | R2        |             | R3       |             | R4       |             | Total (%)        |
|--------------|-----------|-------------|-----------|-------------|----------|-------------|----------|-------------|------------------|
|              | Nr        | %           | Nr        | %           | Nr       | %           | Nr       | %           |                  |
| <b>CT</b>    | <b>39</b> | <b>88.6</b> | 3         | 7.1         | 1        | 2.6         | 1        | 3.3         | <b>44 (100)</b>  |
| <b>CO</b>    | -         | -           | 8         | 19.0        | 3        | 7.9         | 3        | 10.0        | 14 (31.8)        |
| <b>ST</b>    | 1         | 2.3         | 4         | 9.5         | <b>8</b> | <b>21.1</b> | <b>8</b> | <b>26.7</b> | <b>21 (47.7)</b> |
| <b>FD</b>    | -         | -           | -         | -           | -        | -           | -        | -           | 0 (0.0)          |
| <b>SD</b>    | -         | -           | -         | -           | -        | -           | -        | -           | 0 (0.0)          |
| <b>PC</b>    | -         | -           | 4         | 9.5         | -        | -           | -        | -           | 4 (9.1)          |
| <b>EDC</b>   | 3         | 6.8         | 5         | 11.9        | 1        | 2.6         | 1        | 3.3         | 10 (22.7)        |
| <b>CC</b>    | -         | -           | 4         | 9.5         | 4        | 10.5        | 4        | 13.3        | 12 (27.3)        |
| <b>PPP</b>   | -         | -           | 2         | 4.8         | 4        | 10.5        | 4        | 13.3        | 10 (22.7)        |
| <b>NA</b>    | -         | -           | -         | -           | 2        | 5.3         | 2        | 6.7         | 4 (9.1)          |
| <b>CG</b>    | -         | -           | -         | -           | -        | -           | -        | -           | 0 (0.0)          |
| <b>RI</b>    | 1         | 2.3         | <b>11</b> | <b>26.2</b> | 7        | 18.4        | 7        | 23.3        | <b>26 (59.1)</b> |
| <b>Total</b> | 44        | 100         | 42        | 100         | 38       | 100         | 30       | 100         |                  |

Note: CT = Other City; CO = County; ST = State Government; FD = Federal Government; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh)

But interactions between organizations do not always occur based on a rational calculation of benefits. Interactions involved in development of a comprehensive plan are also guided by diverse norms, rules, and standard procedures, and are expected to be differently arranged in the two regions of Minneapolis and Pittsburgh. If we can identify active organizations participating in the planning process in these two regions and measure the relative significance of them, we may be able to argue how the differently arranged modes of governance influence the patterns of interaction regarding development of these plans.

Although complicated at first look, <Table 5-1> presents the core information with respect to the patterns of collaboration in preparation of economic development plans in the Minneapolis region. Twelve major organizations were identified as key participants in the planning process. Surveys were distributed to municipal chief administrative officers, who were then asked to rank those organizations according to importance. R1 in the first row means ranked

#1, R2 ranked #2, and so on. Since not all recipients made use of all the organizations in their ranking, the number of observations decreases as the ranking gets lower. For instance, while 44 municipalities identify the most important participants in the planning process, only 30 out of 44 municipal managers could think of a 4<sup>th</sup> most-important organization.

The percentage measure reported in the table also shows the relative importance of the selected organizations holding the same rank. For example, the 88.6% for city in R1 means that 88.6% of 44 municipal managers think ‘other cities’ are the most significant participants in preparing development plans. Likewise, among the 42 respondents that identified a second most important organization, 26.2% of them see Metropolitan Council as only second to other cities in terms of its significance.

The last column provides a systematic evaluation of the interactions between local municipalities and each of these 12 organizations in the collaborative development of an economic development plan. When I include ranks from 1st to 4<sup>th</sup> according to importance, 100% of 44 survey respondents reported ‘other cities’ as one of the most important participants. Specifically, 39 out of 44 municipal CAOs (Chief Administrative Officer) select other cities as the most important participants, followed by economic development corporations, which received 3 votes overall.

As mentioned above, the other actor whose importance is second only to other cities is Metropolitan Council. A total of 59.1% of answers include this organization in their answer, where 12 out of 26 ranked it either first or second. This result was expected a priori, given the active involvement of Metropolitan Council in the local incidences.

<Table 5-2> illustrates that the patterns of inter-organizational interactions in the Pittsburgh region are fundamentally different from those in the Minneapolis region. First, in Pittsburgh more organizations are involved and the relative importance of each organization is widely distributed. For example, even though other cities is ranked as the most active participant in the Pittsburgh region as well, other organizations’ involvement such as county government, state agencies, and economic development corporations cannot be treated as secondary as in the Minneapolis region.

**Table 5-2. Frequency Distribution of Participants in  
Comprehensive Plan Development: Pittsburgh**

|              | R1        |             | R2        |             | R3       |             | R4 |      | Total<br>(%)     |
|--------------|-----------|-------------|-----------|-------------|----------|-------------|----|------|------------------|
|              | Nr        | %           | Nr        | %           | Nr       | %           | Nr | %    |                  |
| <b>CT</b>    | <b>25</b> | <b>39.7</b> | 3         | 5.1         | 5        | 10.2        | 4  | 10.3 | <b>37 (58.7)</b> |
| <b>CO</b>    | 12        | 19.0        | <b>19</b> | <b>32.2</b> | <b>9</b> | <b>18.4</b> | 7  | 17.9 | <b>47 (74.6)</b> |
| <b>ST</b>    | 9         | 14.3        | 8         | 13.6        | 7        | 14.3        | 8  | 20.5 | <b>32 50.8)</b>  |
| <b>FD</b>    | 1         | 1.6         | 2         | 3.4         | 3        | 6.1         | 3  | 7.7  | 9 (14.3)         |
| <b>SD</b>    | -         | -           | 3         | 5.1         | 1        | 2.0         | -  | -    | 4 (6.3)          |
| <b>PC</b>    | 3         | 4.8         | 1         | 1.7         | -        | -           | -  | -    | 4 (6.3)          |
| <b>EDC</b>   | 7         | 11.1        | 4         | 6.8         | 5        | 10.2        | 5  | 12.8 | 21 (33.3)        |
| <b>CC</b>    | 1         | 1.6         | 6         | 10.2        | -        | -           | 2  | 5.1  | 9 (14.3)         |
| <b>PPP</b>   | 2         | 3.2         | 1         | 1.7         | 5        | 10.2        | 2  | 5.1  | 10 (15.9)        |
| <b>NA</b>    | 1         | 1.6         | 1         | 1.7         | 4        | 8.2         | 1  | 2.6  | 7 (11.1)         |
| <b>CG</b>    | 2         | 3.2         | 7         | 11.9        | 6        | 12.2        | 3  | 7.7  | 18 (28.6)        |
| <b>RI</b>    | -         | -           | 4         | 6.8         | 4        | 8.2         | 4  | 10.3 | 12 (19.0)        |
| <b>Total</b> | 63        | 100         | 59        | 100         | 49       | 100         | 39 | 100  |                  |

Note: CT = Other City; CO = County; ST = State Government; FD = Federal Government; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh)

County governments in the Pittsburgh region are more deeply involved in municipal development plans than in Minneapolis. Almost 75% of respondents responded that county governments are major participants, and more than half put county government as the first or second most important actor. It seems that in the context of no regional authority, county governments in part take the responsibility of regional issues, including economic development.

The Southwestern Pennsylvania Commission as a regional institution did not receive meaningful votes. This can be interpreted to mean that the SPC's authority as a regional MPO is not successful either in inducing voluntary compliances of municipalities or in effectively regulating local decisions on development plans. Municipalities in the Pittsburgh region seem to maintain a more active relationship with a council of governments instead, which supports the idea of picket-fence regionalism promoted by (Wood, 2004). Collective actions on sub-regional issues with neighboring municipalities or county government are always the priority for local

governments in this region. 32 sub-regionally organized councils of governments are the primary institution by which each municipality can communicate and coordinate issues emerging from comprehensive economic development plans.

Although it is exciting to find some regional differences here, information from this survey does not reveal how the interactions determined were formed and are managed. The following section deals with the issues of communicative networks and tries to find other regional differences regarding inter-organizational collaboration.

### ***5.2.2 Network Providers: Who Bridges the Complexity Gap***

Survey question number 11 asked ‘Which of the following organizations help your local government connect to other organizations?’ The answers to this revealed that some organizations not only interact with one another but also perform various functions such as acting as a network brokerage in the policy process. There are five ideal-typical brokerage relations - liaison, representative, gatekeeper, itinerant broker, and coordinator (Knoke, 1990: 145). Whichever brokerage roles the organizations perform, if other organizations are connected through them, they are likely to possess network power or occupy the social position of a structural hole (Burt, 1992). My data hardly specify the brokerage roles in detail, but it is possible to identify the actors which could successfully position themselves as the network brokers.

Without sufficient ties to other network players, local governments either suffer from a lack of crucial information and resources or pay higher opportunity costs that could have been saved if the relevant actors had been involved in local matters in a timely manner.

In the Minneapolis region, three organizations are identified as the most prominent network brokers. Despite notable differences from <Table 5-1>, in <Table 5-3> other cities and Metropolitan Council remain active players in inter-organizational communication. Other cities are still the most important collaborative partner for municipalities, but its dominance is clearly weakened with respect to network brokering in comparison with its role in the case of comprehensive plan development. Likewise, even though it is not considered as ‘the’ most important network player, Metropolitan Council links municipalities to other organizational players, which proves its formal as well as informal influences on municipalities’ behaviors.

**Table 5-3. Frequency Distribution of Network Providers: Minneapolis**

|              | R1        |             | R2        |             | R3        |             | R4       |             | Total (%)        |
|--------------|-----------|-------------|-----------|-------------|-----------|-------------|----------|-------------|------------------|
|              | Nr        | %           | Nr        | %           | Nr        | %           | Nr       | %           |                  |
| <b>CT</b>    | <b>26</b> | <b>63.4</b> | 1         | 2.5         | 1         | 2.6         | -        | -           | <b>28(68.3)</b>  |
| <b>CO</b>    | 4         | 9.8         | <b>21</b> | <b>52.5</b> | 8         | 21.1        | 2        | 5.9         | <b>35 (85.4)</b> |
| <b>ST</b>    | 3         | 7.3         | 3         | 7.5         | 8         | 21.1        | <b>9</b> | <b>26.5</b> | 23 (56.1)        |
| <b>FD</b>    | -         | -           | -         | -           | -         | -           | 3        | 8.8         | 3 (7.3)          |
| <b>SD</b>    | -         | -           | -         | -           | -         | -           | 3        | 8.8         | 3 (7.3)          |
| <b>PC</b>    | -         | -           | 1         | 2.5         | -         | -           | 1        | 2.9         | 1 (2.4)          |
| <b>EDC</b>   | 2         | 4.9         | 3         | 7.5         | 1         | 2.6         | -        | -           | 6 (14.6)         |
| <b>CC</b>    | -         | -           | 4         | 10.0        | 5         | 13.2        | 7        | 20.6        | 16 (39.0)        |
| <b>PPP</b>   | 1         | 2.4         | -         | -           | -         | -           | 1        | 2.9         | 2 (4.9)          |
| <b>NA</b>    | -         | -           | 1         | 2.5         | -         | -           | 1        | 2.9         | 2 (4.9)          |
| <b>CG</b>    | -         | -           | 1         | 2.5         | 3         | 7.9         | -        | -           | 4 (9.8)          |
| <b>RI</b>    | 3         | 7.3         | 5         | 12.5        | <b>12</b> | <b>31.6</b> | 6        | 17.6        | <b>26 (63.4)</b> |
| <b>OTH</b>   | 1         | 2.4         | -         | -           | -         | -           | -        | -           | 1 (2.4)          |
| <b>Total</b> | 41        | 100         | 40        | 100         | 38        | 100         | 34       | 100         |                  |

Note: CT = Other City; CO = County; ST = State Government; FD = Federal Government; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh); OTH = Others

The most visible difference is the emergence of county government as a network broker. The role of the county government in development planning is quite limited in Minneapolis due to the heavy involvement of Metropolitan Council in the planning process. However, county governments remain network entrepreneurs that provide local municipalities with bridges to other organizational units.

In the Pittsburgh region, like in the Minneapolis region, the roles of other cities in the inter-organizational communication become less significant as compared to their roles in development planning. While cities directly participate in their neighbors' economic plans, they seem to be less active in providing informal connections to other organizations. In contrast, state and county governments remain as strong network providers to local municipalities.

**Table 5-4. Frequency Distribution of Network Providers: Pittsburgh**

|              | R1        |             | R2        |             | R3        |             | R4 |      | Total (%)        |
|--------------|-----------|-------------|-----------|-------------|-----------|-------------|----|------|------------------|
|              | Nr        | %           | Nr        | %           | Nr        | %           | Nr | %    |                  |
| <b>CT</b>    | 18        | 25.0        | 1         | 1.4         | 1         | 1.6         | 1  | 1.9  | 21 (29.2)        |
| <b>CO</b>    | 13        | 18.1        | <b>22</b> | <b>31.0</b> | 14        | 21.9        | 6  | 11.5 | <b>55 (76.4)</b> |
| <b>ST</b>    | 8         | 11.1        | 11        | 15.5        | <b>20</b> | <b>31.3</b> | 6  | 11.5 | <b>45 (62.5)</b> |
| <b>FD</b>    | -         | -           | 2         | 2.8         | 4         | 6.3         | 8  | 15.4 | 14 (19.4)        |
| <b>SD</b>    | -         | -           | 2         | 2.8         | 1         | 1.6         | 2  | 3.8  | 5 (6.9)          |
| <b>PC</b>    | 1         | 1.4         | 2         | 2.8         | 1         | 1.6         | 2  | 3.8  | 6 (8.3)          |
| <b>EDC</b>   | 3         | 4.2         | 9         | 12.7        | 3         | 4.7         | 3  | 5.8  | 18 (25.0)        |
| <b>CC</b>    | -         | -           | 6         | 8.5         | 4         | 6.3         | 8  | 15.4 | 18 (25.0)        |
| <b>PPP</b>   | 2         | 2.8         | 1         | 1.4         | 3         | 4.7         | 2  | 3.8  | 8 (11.1)         |
| <b>NA</b>    | 1         | 1.4         | 2         | 2.8         | -         | -           | 2  | 3.8  | 5 (6.9)          |
| <b>CG</b>    | <b>23</b> | <b>31.9</b> | 9         | 12.7        | 7         | 10.9        | 6  | 11.5 | <b>45 (62.5)</b> |
| <b>RI</b>    | 2         | 2.8         | 3         | 4.2         | 5         | 7.8         | 6  | 11.5 | 16 (22.2)        |
| <b>OTH</b>   | 1         | 1.4         | 1         | 1.4         | 1         | 1.6         | -  | -    | 3 (4.2)          |
| <b>Total</b> | 72        | 100         | 71        | 100         | 64        | 100         | 52 | 100  |                  |

Note: CT = Other City; CO = County; ST = State Government; FD = Federal Government; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh); OTH = Others

Perhaps the most significant finding in this table is the importance of councils of governments in inter-organizational communications. Out of 72 respondents, 31.9% replied that they are most heavily dependent on councils of governments in networking and communicating with previously unrelated organizational actors. Thirty two councils of governments exist within the boundaries of the Pittsburgh region (Commonwealth of Pennsylvania, 2007). Given the absence of a formal authority in councils of governments, municipal managers can freely interact with other managers in regular meetings, and can develop long-term informal relationships. In this sense, councils of governments are truly a network-specified organizational form, whose major objective is to build sub-regional professional networks or epidemic communities (Frederickson, 1999) within the pre-defined regional boundaries.

The only region-wide player is the SPC. But as in the case of comprehensive plan development, the SPC is not perceived to be as active as councils of governments. Most likely this is because the membership the SPC is held only by county governments and the city of Pittsburgh so that the municipalities' relationships with the SPC are likely to be indirect.

### **5.3 NETWORKS AND COLLABORATIVE POLICY ACTIVITIES**

In the previous chapter, the collaboration index (CI) was employed as the dependent variable in the multivariate analysis. However, its value is not limited to being a variable only. It also serves as a valuable resource for information on the inter-organizational relationship itself.

We can easily see whom municipalities are more interactive with for each policy activity. Ten kinds of organizations are identified along with eight collaborative policy activities. If a local municipality is interacting with all of the organizations, the total number possible number of linkages is 88. Again it should be noted that organizations and policy activities could not be pre-specified. For example, the category of 'other city' does not indicate there is only one neighboring city. We do not know how many cities our sample municipalities are interacting with until we comprehensively scrutinize the dynamics of collaboration. We cannot name the partner cities a priori. Likewise, with a lack of time and resources, it is extremely difficult to identify all the organizations in the category of neighborhood association, public/private partnership, planning consortia, and so on. Rigorous network analysis may require such a comprehensive approach, but it is not an objective of this dissertation.

In order to accurately describe the patterns of collaboration in the two regions examined, two relational units of analyses are introduced. The first one is the dyadic relation between local municipality and another organizational unit. Despite its simplicity, this network measure provides the most straightforward information on collaborative activities. The second relational unit of analysis is the triad relationship, of 'cluster,' which is defined as local municipality contact with two different players. The major reason for examining clusters of three players is to emphasize how the addition of one player to an existing network or group increases the level of complexity (Agranoff & McGuire, 2003: 110-111). The triad relationships are expected to be

distinctively structured for each policy activity. For example, as our focus moves from one policy activity to another, we may expect to see that local municipalities start to partner with different organizations in order to adapt to increasing complexity. Identifying important network partners of the local governments will also allow us to build practical knowledge of these types of situations in general upon which policy strategies can be developed.

### ***5.3.1 Overview of Linkage: Dyadic Relations***

The first type of collaborative network examined is the dyadic relationship between municipalities and other organizations. The primary goal of this analysis is to identify the most important organizational partner of the local municipalities in economic development, and second, to understand the relative significance of these actors across different policy activities. For example, even if the chamber of commerce is one of the most important partners in a joint policy-making activity, it does not necessarily mean that they are also active in other policy activities such as ‘sharing financial resources.’

<Table 5-5> shows the number of linkages local municipalities in the Minneapolis region have with other organizations. A total of 654 linkages were identified, and these were classified along two prominent dimensions. The first dimension is player-oriented. Ten pre-defined organizations are provided in the player dimension. The last two rows in the table summarize which actors are most active, regardless of policy activity. In Minneapolis, other cities, mostly the neighboring municipalities, make active partners regardless of policy activity with the exception of technical assistantship. It is closely followed by municipality-county partnership, which occupies 22.6% of all dyadic relations. Connection with Metropolitan Council is also crucial, particularly when cities are searching for policy guidance or technical assistance.

The second dimension categorizes dyadic relations with policy activities. From this dimension, linkages are fairly well distributed, except the categories of Pool/Share Personnel Resources and Contracting-out Planning. Engaging in a formal partnership is most common collaborative activity in Minneapolis. These results indicate that municipalities in Minneapolis pursue more formal and sustainable relationships rather than short-lived and ad hoc ones.

Here is must be noted that the overall level of collaboration is much higher in Minneapolis, as can be seen by the numbers for ‘linkage per municipality.’ Linkages for a



municipality average a score of 14.53 in Minneapolis, while municipalities in Pittsburgh have only 8.88 ties with other organizations in average.

**Table 5-5. Frequency Distribution of Dyadic Relations between Players: Minneapolis**

| Activities                                   | CT         | CO         | SD       | PC       | EDC      | CC       | PPP      | NA      | CG       | RI         | OTH     | Total (%)  |
|--|------------|------------|----------|----------|----------|----------|----------|---------|----------|------------|---------|------------|
| <b>Receive Technical Assistance</b>          | 20         | 20         | 5        | 3        | 5        | 5        | 9        | 1       | 1        | 27         | 1       | 97 (14.8)  |
| <b>Engage in Formal Partnership</b>          | 25         | 26         | 7        | 2        | 8        | 6        | 10       | 2       | 2        | 20         | 2       | 110 (16.8) |
| <b>Engage in Joint Policy-making</b>         | 25         | 19         | 9        | 5        | 4        | 3        | 5        | 0       | 1        | 16         | 1       | 88 (13.5)  |
| <b>Engage in Joint Policy-Implementation</b> | 24         | 23         | 6        | 1        | 4        | 2        | 5        | 0       | 0        | 15         | 1       | 81 (12.4)  |
| <b>Pool/Share Financial Resources</b>        | 22         | 21         | 9        | 1        | 6        | 6        | 7        | 2       | 3        | 11         | 2       | 90 (13.8)  |
| <b>Pool/Share Personnel Resources</b>        | 18         | 9          | 4        | 1        | 5        | 2        | 2        | 0       | 2        | 2          | 0       | 45 (6.9)   |
| <b>Contracting-out Planning</b>              | 18         | 3          | 1        | 3        | 2        | 0        | 4        | 1       | 0        | 3          | 1       | 36 (5.5)   |
| <b>Partnership for a Particular Project</b>  | 29         | 27         | 6        | 1        | 5        | 9        | 11       | 3       | 2        | 13         | 2       | 107 (16.4) |
| <b>Total (%)</b>                             | 181 (27.7) | 148 (22.6) | 47 (7.2) | 17 (2.6) | 39 (6.0) | 33 (5.0) | 53 (8.1) | 9 (1.4) | 11 (1.7) | 107 (16.4) | 9 (1.4) | 654 (100)  |
| <b>Linkage per municipality</b>              | 4.02       | 3.29       | 1.04     | 0.38     | 0.87     | 0.73     | 1.18     | 0.20    | 0.24     | 2.38       | 0.20    | 14.53      |

Note: CT = Other City; CO = County; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh); OTH = Others

In comparison, as can be seen in <Table 5-6>, municipalities in Pittsburgh have developed patterns of inter-organizational relationships different from those in Minneapolis. From the actor-oriented dimension, councils of governments emerge as the second most important partners for local government. This fact in part represents the limited role of regional institutions in this region. Partnership with the SPC is not often sought by local governments in the Pittsburgh region - only special districts rank lower. The active involvement of councils of governments and county government in local economic development allows at least two explanations.

**Table 5-6. Frequency Distribution of Dyadic Relations between Players: Pittsburgh**

| Actors \ Activities                   | CT         | CO         | SD       | PC       | EDC      | CC       | PPP      | NA       | CG         | RI       | OTH      | Total (%)  |
|---------------------------------------|------------|------------|----------|----------|----------|----------|----------|----------|------------|----------|----------|------------|
| Receive Technical Assistance          | 17         | 36         | 0        | 6        | 12       | 7        | 11       | 5        | 28         | 11       | 7        | 140 (21.0) |
| Engage in Formal Partnership          | 18         | 26         | 5        | 5        | 11       | 5        | 12       | 5        | 24         | 2        | 3        | 116 (17.4) |
| Engage in Joint Policy-making         | 15         | 13         | 2        | 2        | 4        | 2        | 1        | 5        | 17         | 2        | 1        | 64 (9.6)   |
| Engage in Joint Policy-Implementation | 11         | 14         | 2        | 2        | 2        | 3        | 1        | 5        | 15         | 0        | 1        | 56 (8.4)   |
| Pool/Share Financial Resources        | 15         | 14         | 3        | 2        | 5        | 3        | 5        | 2        | 21         | 0        | 1        | 71 (10.7)  |
| Pool/Share Personnel Resources        | 16         | 10         | 2        | 3        | 2        | 2        | 1        | 2        | 11         | 0        | 0        | 49 (7.4)   |
| Contracting-out Planning              | 12         | 13         | 0        | 1        | 2        | 1        | 2        | 0        | 10         | 2        | 2        | 45 (6.8)   |
| Partnership for a Particular Project  | 21         | 27         | 5        | 5        | 8        | 8        | 14       | 4        | 18         | 3        | 1        | 114 (17.1) |
| Others                                | 0          | 1          | 1        | 1        | 0        | 1        | 2        | 1        | 2          | 1        | 1        | 11 (1.7)   |
| <b>Total (%)</b>                      | 125 (18.8) | 154 (23.1) | 20 (3.0) | 27 (4.1) | 46 (6.9) | 32 (4.8) | 49 (7.4) | 29 (4.4) | 146 (21.9) | 21 (3.2) | 17 (2.6) | 666        |
| <b>Linkage for municipality</b>       | 1.66       | 2.05       | 0.27     | 0.36     | 0.61     | 0.43     | 0.65     | 0.39     | 1.95       | 0.28     | 0.23     | 8.88       |

Note: CT = Other City; CO = County; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh); OTH = Others

First, as briefly argued in the previous section, municipalities in Pittsburgh are seeking community-based and sub-regional cooperation at most. The strong individualistic culture in Pennsylvania local governance makes interventions in local decision-making difficult. Regional cooperation is the individual and independent strategic choice of local government, not a coerced course of action. Second, without formal authority to induce compliance from municipal governments, the SPC is not able to function as a regional institution as well as the Metropolitan Council does in the Minneapolis region. The lack of much communication between the SPC and municipalities indicates a low level of regional cultural and political integration. Even the SPC's

authority on federal transportation fund allocation does not significantly attract local attention. Local governments seem to seek the funding indirectly, using established connections with county governments.

From the activity dimension, Pittsburgh seems similar to Minneapolis, except for the fact that the relationships in Pittsburgh are more technically oriented and short-lived. The ratio of 'Receive Technical Assistance' is significantly higher in Pittsburgh, while the formal engagement in joint policy activities is not as popular as in the Minneapolis region. The combined ratio for the three activities in joint policy activities - 'Engage in Formal Partnership, Engage in Joint Policy-making, and Engage in Joint Policy-Implementation' - is 42.7% in Minneapolis, while it is 35.4% in the Pittsburgh region.

This descriptive analysis of dyadic relationships in the two regions characterizes inter-organizational collaboration in the Pittsburgh region as genuinely voluntary, sub-regional, and strategic, while it depicts the Minneapolis case as coherent, regional, and regulated. However, first, this characterization captures tendencies only; it does not claim the two regions are completely heterogeneous in every aspect. The measurement of dyadic relations helps us to see the patterns of relationships from the network perspective, but this measure also suffers from over-simplicity. Analyzing clusters will ameliorate this shortcoming, and provide us with a tool to systemize the complexities inherent in local and regional collaborative policy interactions.

### ***5.3.2 Understanding Inter-Organizational Networks: Cluster Analysis***

Collaborative networks involving only two players are extremely rare. All networks are different in terms of their participants, durability, number of ties, and stability. In particular, because of its structural flexibility, no network form of organization can perfectly regulate the ins and outs of participants. In other words, relations within a network structure are regarded as structurally unstable, and network durability is always questionable because any players can leave the relationship anytime they realize expected benefits.

Also, in network relations one relationship is always vulnerable to other relationships, and a small change in any network attribute such as players, frequency of interactions, or number of ties tends to generate both intended and unintended transformations in the network system as a whole.

It is almost impossible to prepare for every unexpected outcome which could result from network dynamics. Neither can every interaction between network participants be controlled. How can we improve our understanding of collaborative networks? And how can we decipher the complexities that countless interactions have produced over a long period of time?

This dissertation emphasizes that an addition of a third player to a dyadic relation can increase the capacity of describing the level of complexity to a great extent. The analytic endeavor of this section is not to control this complexity but to describe the patterns of the collaborative relationships in the two regions as close to reality as possible. This can help decision-makers see similarities and differences between the regions more clearly so that they can in turn select more sophisticated and informed development strategies.

The study was modeled after Agranoff & McGuire (2003). Their methodology of network analysis is applied here without major modifications. Building upon their work, our study provides more specified information on network clusters for each policy activities.

#### *5.3.2.1 Overview of Network Clusters: Actor Centrality*

‘Cluster’ or ‘triad cluster’ is defined here as a municipal government in contact with two different organizations. The study measures collaboration as the relationship between three organizations or players (always including the municipality as one of the three) interacting within the context of a specific policy activity (Agranoff & McGuire, 2003: 110-111). The total number of linkages for each organization is converted into a percentage measuring the relative involvement of each organization, and used as an Actor Centrality index.

A total of 1,571 clusters were identified in two regions, has 856 in Minneapolis and 715 in Pittsburgh. In terms of per capita clusters, municipalities in the Minneapolis region have more than twice the number of triad clusters of those in the Pittsburgh region (19.02 and 9.53, respectively).

In considering the difference in the number of clusters in the two regions, we should remember that the measurement of triads does not count network ties that do not involve local governments. Though networks between state agencies, special districts, and economic development corporations are to local economic development, they are methodologically meaningless for this study. It could be a major flaw of this descriptive analysis on the one hand,

but by focusing on networks involving local governments, the hope is to significantly increase the level of knowledge on local municipalities' policy behaviors.

<Table 5-7> and <Table 5-8> provide an overview of the triad clusters in the two regions. As stated in the analysis of dyadic network relations, we expect the different modes of regional governance to have structured network clusters in distinctive ways to a considerable extent.

**Table 5-7. Frequency of Distribution of Clusters and Actor Centrality: Minneapolis**

|                   | CT          | CO          | SD  | PC  | EDC | CC  | PPP  | NA  | CG  | RI          | OTH |
|-------------------|-------------|-------------|-----|-----|-----|-----|------|-----|-----|-------------|-----|
| <b>CT</b>         |             | <b>112</b>  | 41  | 16  | 29  | 27  | 50   | 8   | 9   | <b>70</b>   | 8   |
| <b>CO</b>         | 112         |             | 38  | 5   | 17  | 21  | 39   | 8   | 7   | <b>80</b>   | 7   |
| <b>SD</b>         | 41          | 38          |     | 5   | 8   | 9   | 19   | 5   | 4   | 28          | 5   |
| <b>PC</b>         | 16          | 5           | 5   |     | 7   | 3   | 8    | -   | 4   | 7           | -   |
| <b>EDC</b>        | 29          | 17          | 8   | 7   |     | 9   | 14   | -   | 6   | 11          | -   |
| <b>CC</b>         | 27          | 21          | 9   | 3   | 9   |     | 15   | 5   | 3   | 19          | 4   |
| <b>PPP</b>        | 50          | 39          | 19  | 8   | 14  | 15  |      | 6   | 4   | 28          | 6   |
| <b>NA</b>         | 8           | 8           | 5   | -   | -   | 5   | 6    |     | 1   | 6           | 3   |
| <b>CG</b>         | 9           | 7           | 4   | 4   | 6   | 3   | 4    | 1   |     | 6           | -   |
| <b>RI</b>         | 70          | 80          | 28  | 7   | 11  | 19  | 28   | 6   | 6   |             | 5   |
| <b>OTH</b>        | 8           | 7           | 5   | -   | -   | 4   | 6    | 3   | -   | 5           |     |
| <b>Total</b>      | <b>370</b>  | <b>334</b>  | 162 | 55  | 101 | 115 | 189  | 42  | 44  | <b>260</b>  | 38  |
| <b>Centrality</b> | <b>21.6</b> | <b>19.5</b> | 9.5 | 3.2 | 5.9 | 6.7 | 11.1 | 2.5 | 2.6 | <b>15.2</b> | 2.2 |
| <b>Rank</b>       | <b>1</b>    | <b>2</b>    | 5   | 8   | 7   | 6   | 4    | 10  | 9   | <b>3</b>    | 11  |

Note: CT = Other City; CO = County; ST = State Government; FD = Federal Government; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh); OTH = Others

Every observation in these tables represents a triad relationship between a local municipality and two other organizations. For example, The SD-CT match is in fact a municipality - special district - other city triad cluster in the economic development policy process, and a total 41 clusters of this type are reported, regardless of the collaborative policy activity. The most frequent collaborative linkage involves the county governments and other

cities. A total of 112 triads were reported in this category, meaning that municipalities are most interactive with neighboring cities and county government for the purpose of economic development. CO-RI and CT-RI clusters are next highest.

The last row informs us of the number of triads including each of the 10 organizations. The percentage expression for the total number of linkages represents the Actor Centrality of collaborative cluster networks. According to the table, ‘other cities’ are the most frequent collaborator with local municipalities. A total of 370 triad clusters involving ‘other cities’ were reported, followed by clusters including county governments with 334 clusters total. Clusters including Metropolitan Council occur 260 times, which indicates the active involvement of this regional institution in the Minneapolis region. Those numbers are converted into a centrality measure of 21.6, 19.5, and 15.2, respectively.

In comparison, the most frequent cluster in the Pittsburgh region includes county governments and councils of government. The active involvement of councils of government is particularly notable, compared to the active role of Metropolitan Council in Minneapolis region. The relative importance of other cities as a network partner is lower than in the Minneapolis case, while county governments are involved in the inter-organizational collaboration with municipalities most frequently.

When considering the inter or intra-sectoral network relationships, the two metropolitan regions become more distinctive. Cities, counties, and special districts are pure public organizations regardless of location. Joint activities by these players can only be categorized as intra-sectoral collaboration, whereas any other network relationships are defined as inter-sectoral. In Minneapolis, more than 50% (50.6%) of all clusters occur only between public organizations. This ratio significantly goes up when we include Metropolitan Council, which makes the ratio 65.8%.

In contrast, only 40.7% of clusters are formed within the boundary of the public sector in Pittsburgh. Concerning the fact that there is no corresponding regional authority in Pittsburgh region, the difference in the ratio between the two regions becomes more than 25%.

We can infer from this description that municipalities in Minneapolis have a tendency to pursue economic development by collaboration with other public sector organizations, whereas municipalities in Pittsburgh region are more dependent on inter-sectoral collaboration with private and non-profit organizations. If we recall the fact that the average number of

collaborative clusters per municipality is two times larger in Minneapolis than in Pittsburgh, we can conclude that the intra-public sector collaboration in effect covaries with the sheer volume of overall inter-organizational collaboration, and it is possibly increasing the extent of collaborative policy activities of local municipalities.

**Table 5-8. Frequency of Distribution of Clusters and Actor Centrality: Pittsburgh**

|                   | CT          | CO          | SD  | PC  | EDC | CC  | PPP | NA  | CG          | RI  | OTH |
|-------------------|-------------|-------------|-----|-----|-----|-----|-----|-----|-------------|-----|-----|
| <b>CT</b>         |             | <b>64</b>   | 12  | 7   | 30  | 9   | 25  | 20  | <b>48</b>   | 12  | 10  |
| <b>CO</b>         | 64          |             | 11  | 15  | 27  | 16  | 37  | 18  | <b>80</b>   | 16  | 13  |
| <b>SD</b>         | 12          | 11          |     |     | 4   |     | 9   | 4   | 6           | 2   |     |
| <b>PC</b>         | 7           | 15          |     |     | 1   | 7   | 7   | 3   | 11          | 6   | 1   |
| <b>EDC</b>        | 30          | 27          | 4   | 1   |     | 7   | 14  | 10  | 25          | 3   | 1   |
| <b>CC</b>         | 9           | 16          |     | 7   | 7   |     | 7   | 6   | 23          | 4   | 1   |
| <b>PPP</b>        | 25          | 37          | 9   | 7   | 14  | 7   |     | 9   | 23          | 7   | 2   |
| <b>NA</b>         | 20          | 18          | 4   | 3   | 10  | 6   | 9   |     | 12          | 3   | 6   |
| <b>CG</b>         | 48          | 80          | 6   | 11  | 25  | 23  | 23  | 12  |             | 10  | 9   |
| <b>RI</b>         | 12          | 16          | 2   | 6   | 3   | 4   | 7   | 3   | 10          |     | 2   |
| <b>OTH</b>        | 10          | 13          |     | 1   | 1   | 1   | 2   | 6   | 9           | 2   |     |
| <b>Total</b>      | <b>237</b>  | <b>297</b>  | 48  | 58  | 122 | 80  | 140 | 91  | <b>247</b>  | 65  | 45  |
| <b>Centrality</b> | <b>16.6</b> | <b>20.8</b> | 3.3 | 4.1 | 8.5 | 5.6 | 9.8 | 6.4 | <b>17.3</b> | 4.5 | 3.1 |
| <b>Rank</b>       | <b>3</b>    | <b>1</b>    | 10  | 9   | 5   | 7   | 4   | 6   | <b>2</b>    | 8   | 11  |

Note: CT = Other City; CO = County; ST = State Government; FD = Federal Government; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh); OTH = Others

<Table 5-9> and <5-10> have converted the frequencies from <Table 5-7> and <5-8> into percentages, which can show the distribution of clusters among organizations.

**Table 5-9. Percentage Distribution of Clusters among Players: Minneapolis**

|     | CT          | CO          | SD          | PC          | EDC         | CC          | PPP         | NA          | CG          | RI          | OTH         |
|-----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| CT  |             | <b>33.5</b> | <b>25.3</b> | <b>30.0</b> | <b>28.7</b> | <b>23.5</b> | <b>26.5</b> | <b>19.0</b> | <b>20.5</b> | 26.9        | <b>21.1</b> |
| CO  | <b>30.3</b> |             | 23.5        | 9.3         | 16.8        | 18.3        | 20.6        | <b>19.0</b> | 15.9        | <b>30.8</b> | 18.4        |
| SD  | 11.1        | 11.4        |             | 9.3         | 7.9         | 7.8         | 10.1        | 11.9        | 9.1         | 10.8        | 13.2        |
| PC  | 4.3         | 1.5         | 3.1         |             | 6.9         | 2.6         | 4.2         | -           | 9.1         | 2.7         | -           |
| EDC | 7.8         | 5.1         | 4.9         | 13.2        |             | 7.8         | 7.4         | -           | 13.6        | 4.2         | -           |
| CC  | 7.3         | 6.3         | 5.6         | 3.7         | 8.9         |             | 7.9         | 11.9        | 6.8         | 7.3         | 10.5        |
| PPP | 13.5        | 11.7        | 11.7        | 14.8        | 13.9        | 13.0        |             | 14.3        | 9.1         | 10.8        | 15.8        |
| NA  | 2.2         | 2.4         | 3.1         | -           | -           | 4.3         | 3.2         |             | 2.3         | 2.3         | 7.9         |
| CG  | 2.4         | 2.1         | 2.5         | 7.4         | 5.9         | 2.6         | 2.1         | 2.4         |             | 2.3         | -           |
| RI  | 18.9        | 24.0        | 17.3        | 13.2        | 10.9        | 16.5        | 14.8        | 14.3        | 13.6        |             | 13.2        |
| OTH | 2.2         | 2.1         | 3.1         | -           | -           | 3.5         | 3.2         | 7.1         | -           | 1.9         | -           |

Note: CT = Other City; CO = County; ST = State Government; FD = Federal Government; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh); OTH = Others

The cluster distribution can be discerned by reading the table in a columnar direction, with each number representing the percentage of all linkages involving the player listed in the column heading that also involve each player listed in the left-hand column (Agranoff & McGuire, 2003: 112). For example, 30.3 percent of CT clusters (a municipality and other cities) also involve a county government. Likewise, 33.5 percent of CO clusters (a municipality and county government) also have connection with other city governments. The number in bold indicates the most frequent collaborator.

It is evident from <Table 5-9> that other cities are the most important collaborative partners in any configuration of triad clusters except for the cluster involving municipality and regional institution. ‘County government’ is second only to other cities with respect to significance and is closely followed by Metropolitan Council. The organizational form of public/private partnerships is also notable here since its significance is fairly consistent throughout the columns.

Compared to the Minneapolis case, distribution of clusters among players in Pittsburgh region looks more diverse in terms of the relative significance of each player. Other cities remain



important network partners in every type of cluster. However, the most actively involved organization is county government, which tops 6 of the 11 columns.

**Table 5-10. Percentage Distribution of Clusters among Players: Pittsburgh**

|     | CT          | CO          | SD          | PC          | EDC         | CC          | PPP         | NA          | CG          | RI          | OTH         |
|-----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| CT  |             | 21.5        | <b>25.0</b> | 12.1        | <b>24.6</b> | 11.3        | 17.9        | <b>22.0</b> | 19.4        | 18.5        | 22.2        |
| CO  | <b>27.0</b> |             | 22.9        | <b>25.9</b> | 22.1        | 20.0        | <b>26.4</b> | 19.8        | <b>32.4</b> | <b>24.6</b> | <b>28.9</b> |
| SD  | 5.1         | 3.7         |             |             | 3.3         | -           | 6.4         | 4.4         | 2.4         | 3.1         | -           |
| PC  | 3.0         | 5.1         |             |             | 0.8         | 8.8         | 5.0         | 3.3         | 4.5         | 9.2         | 2.2         |
| EDC | 12.7        | 9.1         | 8.3         | 1.7         |             | 8.8         | 10.0        | 11.0        | 10.1        | 4.6         | 2.2         |
| CC  | 3.8         | 5.4         | -           | 12.1        | 5.7         |             | 5.0         | 6.6         | 9.3         | 6.2         | 2.2         |
| PPP | 10.5        | 12.5        | 18.8        | 12.1        | 11.5        | 8.8         |             | 9.9         | 9.3         | 10.8        | 4.4         |
| NA  | 8.4         | 6.1         | 8.3         | 5.2         | 8.2         | 7.5         | 6.4         |             | 4.9         | 4.6         | 13.3        |
| CG  | 20.3        | <b>26.9</b> | 12.5        | 19.0        | 20.5        | <b>28.8</b> | 16.4        | 13.2        |             | 15.4        | 20.0        |
| RI  | 5.1         | 5.4         | 4.2         | 10.3        | 2.5         | 8.8         | 5.0         | 3.3         | 4.0         |             | 4.4         |
| OTH | 4.2         | 4.4         | -           | 1.7         | 0.8         | 2.5         | 1.4         | 6.6         | 3.6         | 3.1         |             |

Note: CT = Other City; CO = County; ST = State Government; FD = Federal Government; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh); OTH = Others

The active role of councils of governments in the Pittsburgh region is confirmed again in the <Table 5-10>. A considerable amount of clusters are linked to councils of governments, and in particular, 26.9% of clusters configured by municipality and county government are also connected to councils of governments in some way.

Overall, the frequency distribution of the clusters confirms the results from the analysis of dyadic relationships. Neighboring cities and county governments are always the most important partners, regardless of regions. The real difference between the two regions is the municipalities' pattern of interactions with regional institutions and the way they perceive policy issues beyond local jurisdictions. The next section examines these differences in detail and systematizes the patterns of collaboration in accordance with type of policy activity.

### 5.3.2.2 *Actor Centrality in Collaborative Linkages by Type of Activity*

Although the findings from actor centrality successfully identify regional differences to be of relative importance to organizations, it did not address how the relationships between organizations are differently structured in each collaborative policy activity. This section reconfigures and rearranges the network clusters so that we can comprehend how local governments have constructed different economic development networks for each collaborative policy activity.

<Table 5-11> and <Table 5-12> demonstrate that each policy activity possesses its own unique operating dynamic, which can only be executed with a particular organization or combinations of network players. All organizations are not equally involved in all policy activities. The level of importance as a network partner varies with the policy objectives of local governments, as is well portrayed by the changes in rank for each organization.

In the case of the Minneapolis region, <Table 5-11> confirms the primary role of neighboring cities as network partners. Its relative importance is quite stable in all categories of policy activities except for the case of ‘Partnership for a Particular Project.’ Even in this activity, other cities are only second to county government in terms of significance as a network partner. Its consistent role in collaboration with our sample municipalities would be the first characterization of the Minneapolis region.

The Metropolitan Council’s participation can be systemically comprehended as well. Its importance as a network partner is particularly strong in the activities of ‘Receive Technical Assistance’ and ‘Engage in Joint Policy-Making.’ Concerning its formal authority with respect to regional policy issues, heavy involvement of the Metropolitan Council in local matters was expected, but the level of significance could not be anticipated.

Including county government as the other active network participant, we can possibly label the Minneapolis region as a public-oriented, regionally integrated, and collaboratively active metropolitan region.

**Table 5-11. Actor Centrality in Collaborative Linkages by Type of Activity: Minneapolis**

|                     |                                       |                  | CT   | CO   | SD   | PC  | EDC  | CC   | PPP  | NA   | CG  | RI   | OTH |       |
|---------------------|---------------------------------------|------------------|------|------|------|-----|------|------|------|------|-----|------|-----|-------|
| Joint Policy Effort | Receive Technical Assistance          | Actor Centrality | 20.5 | 18.9 | 7.0  | 4.1 | 6.6  | 6.6  | 12.3 | 1.6  | 1.2 | 19.3 | 2.0 | 100.0 |
|                     |                                       | Rank             | 1    | 3    | 5    | 8   | 6    | 6    | 4    | 10   | 11  | 2    | 9   |       |
|                     | Engage in Formal Partnership          | Actor Centrality | 19.9 | 19.1 | 9.0  | 2.3 | 6.6  | 6.9  | 11.0 | 3.2  | 3.2 | 16.8 | 2.0 | 100.0 |
|                     |                                       | Rank             | 1    | 2    | 5    | 10  | 7    | 6    | 4    | 8    | 8   | 3    | 11  |       |
|                     | Engage in Joint Policy-making         | Actor Centrality | 24.4 | 18.9 | 10.4 | 6.5 | 4.0  | 4.0  | 8.5  | 0.0  | 1.0 | 19.9 | 2.5 | 100.0 |
|                     |                                       | Rank             | 1    | 3    | 4    | 6   | 7    | 7    | 5    | 11   | 10  | 2    | 9   |       |
|                     | Engage in Joint Policy-Implementation | Actor Centrality | 25.3 | 20.9 | 10.4 | 3.3 | 5.5  | 3.8  | 10.4 | 0.0  | 0.0 | 19.2 | 1.1 | 100.0 |
|                     |                                       | Rank             | 1    | 2    | 4    | 8   | 6    | 7    | 4    | 10   | 10  | 3    | 9   |       |
| Resource Exchange   | Sub-Total                             | Actor Centrality | 22.0 | 19.3 | 9.0  | 3.8 | 5.9  | 5.7  | 10.7 | 1.5  | 1.6 | 18.5 | 2.0 | 100.0 |
|                     |                                       | Rank             | 1    | 2    | 5    | 8   | 6    | 7    | 4    | 11   | 10  | 3    | 9   |       |
|                     | Pool/Share Financial Resources        | Actor Centrality | 20.1 | 17.5 | 12.7 | 2.2 | 6.7  | 8.2  | 10.1 | 3.4  | 4.1 | 12.3 | 2.6 | 100.0 |
|                     |                                       | Rank             | 1    | 2    | 4    | 11  | 7    | 6    | 5    | 9    | 8   | 3    | 10  |       |
| Project-Based Work  | Pool/Share Personnel Resources        | Actor Centrality | 28.6 | 15.5 | 13.1 | 6.0 | 10.7 | 2.4  | 9.5  | 0.0  | 9.5 | 4.8  | 0.0 | 100.0 |
|                     |                                       | Rank             | 1    | 2    | 3    | 7   | 4    | 9    | 5    | 10   | 5   | 8    | 10  |       |
|                     | Sub-Total                             | Actor Centrality | 22.2 | 17.0 | 12.8 | 3.1 | 7.7  | 6.8  | 9.9  | 2.6  | 5.4 | 10.5 | 2.0 | 100.0 |
|                     |                                       | Rank             | 1    | 2    | 3    | 9   | 6    | 7    | 5    | 10   | 8   | 4    | 11  |       |
| Project-Based Work  | Contracting-out Planning              | Actor Centrality | 34.2 | 13.2 | 7.9  | 7.9 | 2.6  | 0.0  | 15.8 | 10.5 | 0.0 | 5.3  | 2.6 | 100.0 |
|                     |                                       | Rank             | 1    | 3    | 5    | 5   | 8    | 10   | 2    | 4    | 10  | 7    | 8   |       |
|                     | Partnership for a Particular Project  | Actor Centrality | 19.5 | 20.7 | 7.9  | 1.2 | 4.7  | 10.5 | 12.8 | 4.4  | 2.6 | 11.7 | 4.1 | 100.0 |
|                     |                                       | Rank             | 2    | 1    | 6    | 11  | 7    | 5    | 3    | 8    | 10  | 4    | 9   |       |
|                     | Sub-Total                             | Actor Centrality | 21.0 | 19.9 | 7.9  | 1.8 | 4.5  | 9.4  | 13.1 | 5.0  | 2.4 | 11.0 | 3.9 | 100.0 |
|                     |                                       | Rank             | 1    | 2    | 6    | 11  | 8    | 5    | 3    | 7    | 10  | 4    | 9   |       |
|                     | Total                                 | Actor Centrality | 21.6 | 19.5 | 9.5  | 3.2 | 5.9  | 6.7  | 11.1 | 2.5  | 2.6 | 15.2 | 2.2 |       |
|                     |                                       | Rank             | 1    | 2    | 5    | 8   | 7    | 6    | 4    | 10   | 9   | 3    | 11  |       |

**Table 5-12. Actor Centrality in Collaborative Linkages by Type of Activity: Pittsburgh**

|                     |                                       |                  | CT   | CO   | SD  | PC  | EDC  | CC  | PPP  | NA   | CG   | RI  | OTH |       |
|---------------------|---------------------------------------|------------------|------|------|-----|-----|------|-----|------|------|------|-----|-----|-------|
| Joint Policy Effort | Receive Technical Assistance          | Actor Centrality | 13.6 | 20.3 | 0.0 | 4.6 | 9.5  | 7.4 | 9.2  | 5.6  | 16.2 | 9.2 | 4.4 | 100.0 |
|                     |                                       | Rank             | 3    | 1    | 11  | 9   | 4    | 7   | 5    | 8    | 2    | 5   | 10  |       |
|                     | Engage in Formal Partnership          | Actor Centrality | 16.6 | 19.9 | 4.6 | 5.0 | 9.6  | 2.6 | 12.9 | 7.0  | 16.2 | 2.6 | 3.0 | 100.0 |
|                     |                                       | Rank             | 2    | 1    | 8   | 7   | 5    | 10  | 4    | 6    | 3    | 10  | 9   |       |
|                     | Engage in Joint Policy-making         | Actor Centrality | 18.6 | 19.5 | 2.5 | 2.5 | 6.8  | 5.9 | 4.2  | 9.3  | 21.2 | 5.9 | 3.4 | 100.0 |
|                     |                                       | Rank             | 3    | 2    | 10  | 10  | 5    | 6   | 8    | 4    | 1    | 6   | 9   |       |
|                     | Engage in Joint Policy-Implementation | Actor Centrality | 18.1 | 22.9 | 3.6 | 2.4 | 3.6  | 4.8 | 3.6  | 13.3 | 22.9 | 0.0 | 4.8 | 100.0 |
|                     |                                       | Rank             | 3    | 1    | 7   | 10  | 7    | 5   | 7    | 4    | 1    | 11  | 5   |       |
| Resource Exchange   | Sub-Total                             | Actor Centrality | 15.7 | 20.3 | 2.2 | 4.3 | 8.6  | 5.4 | 9.3  | 7.3  | 17.5 | 5.7 | 3.8 | 100.0 |
|                     |                                       | Rank             | 3    | 1    | 11  | 9   | 5    | 8   | 4    | 6    | 2    | 7   | 10  |       |
|                     | Pool/Share Financial Resources        | Actor Centrality | 17.2 | 20.9 | 6.0 | 3.0 | 11.2 | 3.7 | 9.7  | 6.7  | 18.7 | 0.0 | 3.0 | 100.0 |
|                     |                                       | Rank             | 3    | 1    | 7   | 9   | 4    | 8   | 5    | 6    | 2    | 11  | 9   |       |
| Project-Based Work  | Pool/Share Personnel Resources        | Actor Centrality | 26.3 | 19.7 | 5.3 | 3.9 | 7.9  | 5.3 | 3.9  | 2.6  | 25.0 | 0.0 | 0.0 | 100.0 |
|                     |                                       | Rank             | 1    | 3    | 5   | 7   | 4    | 5   | 7    | 9    | 2    | 10  | 10  |       |
|                     | Sub-Total                             | Actor Centrality | 20.5 | 20.5 | 5.7 | 3.3 | 10.0 | 4.3 | 7.6  | 5.2  | 21.0 | 0.0 | 1.9 | 100.0 |
|                     |                                       | Rank             | 2    | 2    | 6   | 9   | 4    | 8   | 5    | 7    | 1    | 11  | 10  |       |
| Project-Based Work  | Contracting-out Planning              | Actor Centrality | 25.0 | 28.6 | 0.0 | 3.6 | 8.9  | 3.6 | 0.0  | 0.0  | 17.9 | 5.4 | 7.1 | 100.0 |
|                     |                                       | Rank             | 2    | 1    | 9   | 7   | 4    | 7   | 9    | 9    | 3    | 6   | 5   |       |
|                     | Partnership for a Particular Project  | Actor Centrality | 14.8 | 21.1 | 4.8 | 4.4 | 7.0  | 7.8 | 15.2 | 5.2  | 14.1 | 4.1 | 1.5 | 100.0 |
|                     |                                       | Rank             | 3    | 1    | 8   | 9   | 6    | 5   | 2    | 7    | 4    | 10  | 11  |       |
|                     | Sub-Total                             | Actor Centrality | 16.6 | 22.4 | 4.0 | 4.3 | 7.4  | 7.1 | 12.6 | 4.3  | 14.7 | 4.3 | 2.5 | 100.0 |
|                     |                                       | Rank             | 2    | 1    | 10  | 7   | 5    | 6   | 4    | 7    | 3    | 7   | 11  |       |
|                     | Total                                 | Actor Centrality | 16.6 | 20.8 | 3.3 | 4.1 | 8.5  | 5.6 | 9.8  | 6.4  | 17.3 | 4.5 | 3.1 |       |
|                     |                                       | Rank             | 3    | 1    | 11  | 9   | 5    | 7   | 4    | 6    | 2    | 8   | 10  |       |

The summary of actor centrality in the Pittsburgh metropolitan region is provided by <Table 5-12>. Even at a glance we can observe several fundamental features of inter-organizational collaboration, among which the emergence of county government as the most active network participant is the foremost.

As briefly argued before, county governments partly play the roles performed by the Metropolitan Council in Minneapolis. Without a resourceful regional policy partner, municipalities in Pittsburgh are likely to be dependent on county governments in dealing with inter-jurisdictional policy problems. The other regional hallmark of the Pittsburgh metropolis would be the municipalities' voluntary participation in councils of governments. Councils of governments are especially active in the activities of joint policy making and implementation and resource exchanges. These results are demonstrating the possibility of voluntary collaboration on inter-organizational policy issues in a context of no central authority. However, it is hard to believe that councils of governments are as equally involved in local incidences as the Metropolitan Council, at least in any substantive way. However, they are appreciated more as network entrepreneurs or providers in that transaction costs that would have been excessive can be controlled to a manageable extent (Feiock et al, 2007: Andrew, 2006). Moreover, several empirical analyses have demonstrated that the membership of councils of governments substantially increases the likelihood of inter-organizational collaboration (LeRoux, 2007). The multiplicity of such organizations in the Pittsburgh region has to be noted as valuable regional asset which may play a key role in future economic development.

The comparatively rare inclusion of special districts in collaboration is another point of surprise. It is often said that the lack of region-wide decision-making authority encourages an adoption of a special district form of government to deal with inter-jurisdictional policy problems. This theoretical expectation is in fact evidenced by the 333 special districts in the Pittsburgh MSA.<sup>27</sup>

Given the nature of special districts, they are expected to be connected to local governments in any way possible. But the results say that they are lively only in the activity of resource exchanges. The absence of special districts in collaborative networks in Pittsburgh

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<sup>27</sup> This number does not include special districts in Armstrong, Greene, Indiana, and Lawrence county.

becomes more clearly observed when it is compared to the Minneapolis region, in which their participations in collaborative networks are well documented and appreciated.<sup>28</sup>

In sum, we can safely say that actor centrality in various features gives us fairly consistent results. Regional differences are well captured as well. In Minneapolis, neighboring cities are participating in almost every policy network, along with county governments and Metropolitan Council. Public sector based, region-wide, and rule-following collaboration may be the best characterization of inter-organizational collaboration in the Minneapolis region.

Despite some similarities to Minneapolis, the Pittsburgh region is described somewhat different by the measure of actor centrality. County governments are most frequently connected to local municipalities, but their importance as network players is less dominating. Councils of governments have almost as many ties as county governments with local municipalities. The relative importance of cities bordering our sample municipalities is significantly lower compared to in the Minneapolis region. Along with the fact that the per capita clusters of local municipalities in Pittsburgh number less than half of those in the Minneapolis region we can conclude that inter-organizational collaboration in the Pittsburgh region can be characterized as inter-sectoral, sub-regional, and voluntary collective actions of local governments

This conclusion is supported further if we look at the phenomena of collaboration from the perspective of policy activity. The next section introduces the concept of Activity Centrality and analyzes the inter-organizational networks in the two regions from this aspect.

#### *5.3.2.3 Overview of Linkages: Activity Centrality*

The previous section centered on measuring the extent to which each actor collaborates with others in an inter-organizational context. Despite its useful information on collaborative networks in the two regions, it does not address how these networks are differently arranged for particular policy activities. For example, we cannot expect the pattern of clustering in the policy activity of technical assistance to be identical to the one in resource exchanges. Knowing which actors are most active would not be sufficient. In this regard, I adopt the measure of Activity Centrality, which is the percentage expression of total number of linkages for each of 8 policy

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<sup>28</sup> As of 2007, 22 special districts exist in the territory of the Minneapolis region.

activities, measuring the degree of relative involvement of each activity for a specific organization.

The first measure involves only number of clusters in each activity type (Joint Policy Effort, Resource Exchange, and Project-based Partnership). We can infer from this measure the objectives of network clustering and the relative significance of each policy activity in the two regions.

**Table 5-13. Activity Centrality: Minneapolis**

|                      |                                       | CT         | CO         | SD         | PC        | EDC        | CC         | PPP        | NA        | CG        | RI         | OTH       | TOT         | A/C (%)     |
|----------------------|---------------------------------------|------------|------------|------------|-----------|------------|------------|------------|-----------|-----------|------------|-----------|-------------|-------------|
| Joint Policy Efforts | Receive Technical Assistance          | 50         | 46         | 17         | 10        | 16         | 16         | 30         | 4         | 3         | 47         | 5         | 244         | 14.3        |
|                      | Engage in Formal Partnership          | 69         | 66         | 31         | 8         | 23         | 24         | 38         | 11        | 11        | 58         | 7         | 346         | 20.3        |
|                      | Engage in Joint Policy-making         | 49         | 38         | 21         | 13        | 8          | 8          | 17         |           | 2         | 40         | 5         | 201         | 11.8        |
|                      | Engage in Joint Policy Implementation | 46         | 38         | 19         | 6         | 10         | 7          | 19         |           |           | 35         | 2         | 182         | 10.7        |
|                      |                                       | <b>214</b> | <b>188</b> | <b>88</b>  | <b>37</b> | <b>57</b>  | <b>55</b>  | <b>104</b> | <b>15</b> | <b>16</b> | <b>180</b> | <b>19</b> | <b>973</b>  | <b>57.0</b> |
| Resource Exchange    | Pool/Share Financial Resources        | 54         | 47         | 34         | 6         | 18         | 22         | 27         | 9         | 11        | 33         | 7         | 268         | 15.7        |
|                      | Pool/Share Personnel Resources        | 24         | 13         | 11         | 5         | 9          | 2          | 8          |           | 8         | 4          |           | 84          | 4.9         |
|                      |                                       | <b>78</b>  | <b>60</b>  | <b>45</b>  | <b>11</b> | <b>27</b>  | <b>24</b>  | <b>35</b>  | <b>9</b>  | <b>19</b> | <b>37</b>  | <b>7</b>  | <b>352</b>  | <b>20.6</b> |
| Project-Based Work   | Contracting-out Planning              | 13         | 5          | 3          | 3         | 1          |            | 6          | 4         |           | 2          | 1         | 38          | 2.2         |
|                      | Partnership for a Particular Project  | 67         | 71         | 27         | 4         | 16         | 36         | 44         | 15        | 9         | 40         | 14        | 343         | 20.1        |
|                      |                                       | <b>80</b>  | <b>76</b>  | <b>30</b>  | <b>7</b>  | <b>17</b>  | <b>36</b>  | <b>50</b>  | <b>19</b> | <b>9</b>  | <b>42</b>  | <b>15</b> | <b>381</b>  | <b>22.3</b> |
|                      |                                       | <b>370</b> | <b>334</b> | <b>162</b> | <b>55</b> | <b>101</b> | <b>115</b> | <b>189</b> | <b>42</b> | <b>44</b> | <b>260</b> | <b>38</b> | <b>1712</b> | <b>100</b>  |

Note: CT = Other City; CO = County; ST = State Government; FD = Federal Government; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh); OTH = Others

The numbers in each box represent the number of triad clusters involving organizations listed in the first row. In <Table 5-13>, the number of 50 in the third column means that in the policy activity of ‘Receive Technical Assistance,’ 50 clusters including other cities are reported.

Likewise, the number 66 in the box in the fourth column and third row denotes 66 out of 346 ‘Engage in Formal Partnership’ activities include county government as network participants in clusters.

**Table 5-14. Activity Centrality: Minneapolis**

|                      |                                       | CT         | CO         | SD         | PC        | EDC        | CC         | PPP        | NA        | CG        | RI         | OTH       | TOT         | A/C (%)     |
|----------------------|---------------------------------------|------------|------------|------------|-----------|------------|------------|------------|-----------|-----------|------------|-----------|-------------|-------------|
| Joint Policy Efforts | Receive Technical Assistance          | 50         | 46         | 17         | 10        | 16         | 16         | 30         | 4         | 3         | 47         | 5         | 244         | 14.3        |
|                      | Engage in Formal Partnership          | 69         | 66         | 31         | 8         | 23         | 24         | 38         | 11        | 11        | 58         | 7         | 346         | 20.3        |
|                      | Engage in Joint Policy-making         | 49         | 38         | 21         | 13        | 8          | 8          | 17         |           | 2         | 40         | 5         | 201         | 11.8        |
|                      | Engage in Joint Policy Implementation | 46         | 38         | 19         | 6         | 10         | 7          | 19         |           |           | 35         | 2         | 182         | 10.7        |
|                      |                                       | <b>214</b> | <b>188</b> | <b>88</b>  | <b>37</b> | <b>57</b>  | <b>55</b>  | <b>104</b> | <b>15</b> | <b>16</b> | <b>180</b> | <b>19</b> | <b>973</b>  | <b>57.0</b> |
| Resource Exchange    | Pool/Share Financial Resources        | 54         | 47         | 34         | 6         | 18         | 22         | 27         | 9         | 11        | 33         | 7         | 268         | 15.7        |
|                      | Pool/Share Personnel Resources        | 24         | 13         | 11         | 5         | 9          | 2          | 8          |           | 8         | 4          |           | 84          | 4.9         |
|                      |                                       | <b>78</b>  | <b>60</b>  | <b>45</b>  | <b>11</b> | <b>27</b>  | <b>24</b>  | <b>35</b>  | <b>9</b>  | <b>19</b> | <b>37</b>  | <b>7</b>  | <b>352</b>  | <b>20.6</b> |
| Project-Based Work   | Contracting-out Planning              | 13         | 5          | 3          | 3         | 1          |            | 6          | 4         |           | 2          | 1         | 38          | 2.2         |
|                      | Partnership for a Particular Project  | 67         | 71         | 27         | 4         | 16         | 36         | 44         | 15        | 9         | 40         | 14        | 343         | 20.1        |
|                      |                                       | <b>80</b>  | <b>76</b>  | <b>30</b>  | <b>7</b>  | <b>17</b>  | <b>36</b>  | <b>50</b>  | <b>19</b> | <b>9</b>  | <b>42</b>  | <b>15</b> | <b>381</b>  | <b>22.3</b> |
|                      |                                       | <b>370</b> | <b>334</b> | <b>162</b> | <b>55</b> | <b>101</b> | <b>115</b> | <b>189</b> | <b>42</b> | <b>44</b> | <b>260</b> | <b>38</b> | <b>1712</b> | <b>100</b>  |

Note: CT = Other City; CO = County; ST = State Government; FD = Federal Government; SD = Special District; PC = Planning Consortia; EDC = Economic Development Corporation; CC = Chamber of Commerce; PPP = Public/Private Partnership; NA = Neighborhood Association; CG = Council of Governments; RI = Regional Institution (Metropolitan Council in Minneapolis, Southwestern Pennsylvania Commission in Pittsburgh); OTH = Others

The measure of Activity Centrality in the last columns of <Table 5-13> and <Table 5-14> demonstrate the relative importance of each policy activity in the two regions. For example, while 14.3% of all triad clusters in the Minneapolis region are arranged in the policy activity of Technical Assistance, almost twice as many clusters are reported in the Pittsburgh region in this activity category. Likewise, the activity centralities of Pool/Share Financial Resources illustrate a considerable difference in the relative significance of this policy activity for each region.



If we categorize those activities into three types of collaborative policy activities, the differences between the two regions become more conspicuous. While municipalities in Minneapolis are more apt to share their own resources (20.6% vs 14.6%), local governments in the Pittsburgh region cooperate more with other organizations in joint policy processes (57.0% vs 62.5%). However, this type of comparison might be misleading as to the true differences embedded in the regional contexts. If we consider the fact that the activity of ‘Receive Technical Assistance’ is qualitatively different from the other three activities in the category of ‘Joint Policy Efforts’, municipalities in the Pittsburgh region seem less cooperative in policy efforts than Minneapolis. I believe the latter interpretation would be more appropriate in the sense that first, collaboration on technical assistance is less formal, shorter-lived and less reciprocal, and second, it does not have the integrative attributes that the other activities possess.

According to this interpretation, the percentage of policy efforts activities in Minneapolis is 7.6% higher than that of Pittsburgh’s (42.8% vs 35.2%). In particular, the activities for ‘Formal Policy Partnership’ are most frequently carried out by inter-organizational networks in Minneapolis (20.3%), while network clusters around technical assistance are reported most in the Pittsburgh region (27.3%). Engaging in formal partnership is also a significant policy strategy for local governments in the Pittsburgh region (21.1%). But joint policy-making and implementation are much more common in Minneapolis (22.5%) than Pittsburgh (14.1%).

Municipalities in Pittsburgh seem to be more independent in resource utilization. Less than 15% of clusters have devoted to resource exchange activities in Pittsburgh, whereas the percentage in Minneapolis is more than 20% (20.3%). And finally, short-term clusters for particular projects are similar in number in the two regions (22.3% vs 22.8%).

#### *5.3.2.4 Activity Centrality in Collaborative Linkages by Type of Actor*

The second activity-oriented measure is concerned with the extent of organizations’ devotion to a particular policy activity. For example, if a municipality reports that county government is involved in a total of eight clusters and six of these clusters involve joint policy efforts, then centralization for the county government within that activity would be 75%. That is, 75% of all county government collaboration would be devoted to joint policy effort activities. Such activity would thus be viewed as most central to the county government’s involvement with the

municipality's economic development effort (Agranoff & McGuire, 2003:118). The question is then as follows: To what extent is the involvement of player A devoted to activity B?

The comparative advantage of this measure over the first stems from its comprehensiveness in data analyses. While the first one provides the number of clusters involving organizations in each policy activity, <Table 5-15> and <Table 5-16> convert them into percentage distribution of activity centrality and rank each in accordance with its relative significance.

Unlike the case of actor centrality displayed in <Table 5-13> and <Table 5-14>, the ranks given to each box should be read in a columnar manner. For instance, 18.5 in the fourth column and third row denotes that out of 8 policy activities that involve other cities, 18.5% of all clusters are structured for the 'Receive Technical Assistance' activity. The number of clusters including other cities are least found in the activity of 'Contracting-Out Planning,' which was given rank number 8.

The overall results in <Table 5-15> and <Table 5-16> reconfirm the patterns of activity centrality reported in the last section. In the Minneapolis region, two collaborative activities of 'Engage in Formal Partnership,' and 'Partnership for a Particular Project' are similarly central to most organizations on the list. It is notable that in the activity of formal partnership, public organizations (other cities, county, Metropolitan Council) participation is more active, while organizations from private and non-profit sectors (CC, PPP, NA) are most participatory in short-term partnerships for particular projects. In other words, long-term and formal collaboration is better sustained by public sector organizations, whereas ad hoc types of cooperation are more favored by network participants from other social sectors.

Sharing financial resources is the third most common activity jointly pursued by multiples actors. Special districts in particular are most frequently clustered with local governments in financial exchange networks more than in other collaborative policy activities.

**Table 5-15. Activity Centrality in Collaborative Linkages by Type of Actor: Minneapolis**

|                     |                                       |                     | CT   | CO   | SD   | PC   | EDC  | CC   | PPP  | NA   | CG   | RI   | OTH  |      |
|---------------------|---------------------------------------|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Joint Policy Effort | Receive Technical Assistance          | Activity Centrality | 13.4 | 14.2 | 10.4 | 18.2 | 15.8 | 13.9 | 15.9 | 9.3  | 6.8  | 18.1 | 12.2 | 14.3 |
|                     |                                       | Rank                | 4    | 4    | 6    | 2    | 3    | 4    | 3    | 4    | 5    | 2    | 4    | 4    |
|                     | Engage in Formal Partnership          | Activity Centrality | 18.5 | 20.4 | 19.0 | 14.5 | 22.8 | 20.9 | 20.1 | 25.6 | 25.0 | 22.4 | 17.1 | 20.3 |
|                     |                                       | Rank                | 1    | 2    | 2    | 3    | 1    | 2    | 2    | 2    | 1    | 1    | 2    | 1    |
|                     | Engage in Joint Policy-making         | Activity Centrality | 13.2 | 11.7 | 12.9 | 23.6 | 7.9  | 7.0  | 9.0  | 0.0  | 4.5  | 15.4 | 12.2 | 11.8 |
|                     |                                       | Rank                | 5    | 5    | 4    | 1    | 7    | 5    | 6    | 6    | 6    | 3    | 4    | 5    |
|                     | Engage in Joint Policy-Implementation | Activity Centrality | 12.4 | 11.7 | 11.7 | 10.9 | 9.9  | 6.1  | 10.1 | 0.0  | 0.0  | 13.5 | 4.9  | 10.7 |
|                     |                                       | Rank                | 6    | 5    | 5    | 4    | 5    | 6    | 5    | 6    | 8    | 5    | 6    | 6    |
|                     | Total                                 | Activity Centrality | 57.5 | 58.0 | 54.0 | 67.3 | 56.4 | 47.8 | 55.0 | 34.9 | 36.4 | 69.5 | 46.3 | 57.0 |
|                     |                                       | Rank                |      |      |      |      |      |      |      |      |      |      |      |      |
| Resource Exchange   | Pool/Share Financial Resources        | Activity Centrality | 14.5 | 14.5 | 20.9 | 10.9 | 17.8 | 19.1 | 14.3 | 20.9 | 25.0 | 12.7 | 17.1 | 15.7 |
|                     |                                       | Rank                | 3    | 3    | 1    | 4    | 2    | 3    | 4    | 3    | 1    | 6    | 2    | 3    |
|                     | Pool/Share Personnel Resources        | Activity Centrality | 6.5  | 4.0  | 6.7  | 9.1  | 8.9  | 1.7  | 4.2  | 0.0  | 18.2 | 1.5  | 0.0  | 4.9  |
|                     |                                       | Rank                | 7    | 7    | 7    | 6    | 6    | 7    | 7    | 6    | 4    | 7    | 8    | 7    |
|                     | Total                                 | Activity Centrality | 21.0 | 18.5 | 27.6 | 20.0 | 26.7 | 20.9 | 18.5 | 20.9 | 43.2 | 14.3 | 17.1 | 20.6 |
|                     |                                       | Rank                |      |      |      |      |      |      |      |      |      |      |      |      |
| Project-Based Work  | Contracting-out Planning              | Activity Centrality | 3.5  | 1.5  | 1.8  | 5.5  | 1.0  | 0.0  | 3.2  | 9.3  | 0.0  | 0.8  | 2.4  | 2.2  |
|                     |                                       | Rank                | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 4    | 8    | 8    | 7    | 8    |
|                     | Partnership for a Particular Project  | Activity Centrality | 18.0 | 21.9 | 16.6 | 7.3  | 15.8 | 31.3 | 23.3 | 34.9 | 20.5 | 15.4 | 34.1 | 20.1 |
|                     |                                       | Rank                | 2    | 1    | 3    | 7    | 3    | 1    | 1    | 1    | 3    | 3    | 1    | 2    |
|                     | Total                                 | Activity Centrality | 21.5 | 23.5 | 18.4 | 12.7 | 16.8 | 31.3 | 26.5 | 44.2 | 20.5 | 16.2 | 36.6 | 22.3 |
|                     |                                       | Rank                |      |      |      |      |      |      |      |      |      |      |      |      |
|                     | Total                                 | Activity Centrality | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |

**Table 5-16. Activity Centrality in Collaborative Linkages by Type of Actor: Pittsburgh**

|                     |                                       |                     | CT   | CO   | SD   | PC   | EDC  | CC   | PPP  | NA   | CG   | RI   | OTH  |      |
|---------------------|---------------------------------------|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Joint Policy Effort | Receive Technical Assistance          | Activity Centrality | 22.4 | 26.6 | 0.0  | 30.5 | 30.3 | 36.3 | 25.7 | 24.4 | 25.4 | 55.4 | 37.0 | 27.3 |
|                     |                                       | Rank                | 1    | 1    | 7    | 1    | 1    | 1    | 3    | 1    | 1    | 1    | 1    | 1    |
|                     | Engage in Formal Partnership          | Activity Centrality | 21.1 | 20.2 | 31.1 | 25.4 | 23.8 | 10.0 | 27.9 | 23.3 | 19.8 | 12.3 | 19.6 | 21.1 |
|                     |                                       | Rank                | 2    | 2    | 1    | 2    | 2    | 3    | 2    | 2    | 3    | 3    | 2    | 2    |
|                     | Engage in Joint Policy-making         | Activity Centrality | 9.3  | 7.7  | 6.7  | 5.1  | 6.6  | 8.8  | 3.6  | 12.2 | 10.1 | 10.8 | 8.7  | 8.3  |
|                     |                                       | Rank                | 5    | 5    | 5    | 5    | 5    | 4    | 5    | 4    | 4    | 4    | 3    | 5    |
| Resource Exchange   | Engage in Joint Policy-Implementation | Activity Centrality | 6.3  | 6.4  | 6.7  | 3.4  | 2.5  | 5.0  | 2.1  | 12.2 | 7.7  | 0.0  | 8.7  | 5.8  |
|                     |                                       | Rank                | 7    | 6    | 5    | 7    | 8    | 6    | 6    | 4    | 6    | 6    | 3    | 6    |
|                     | Total                                 | Activity Centrality | 59.1 | 60.9 | 44.4 | 64.4 | 63.1 | 60.0 | 59.3 | 72.2 | 62.9 | 78.5 | 73.9 | 62.5 |
|                     |                                       | Rank                |      |      |      |      |      |      |      |      |      |      |      |      |
|                     | Pool/Share Financial Resources        | Activity Centrality | 9.7  | 9.4  | 17.8 | 6.8  | 12.3 | 6.3  | 9.3  | 10.0 | 10.1 | 0.0  | 8.7  | 9.4  |
|                     |                                       | Rank                | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 6    | 4    | 6    | 3    | 4    |
| Project-Based Work  | Pool/Share Personnel Resources        | Activity Centrality | 8.4  | 5.1  | 8.9  | 5.1  | 4.9  | 5.0  | 2.1  | 2.2  | 7.7  | 0.0  | 0.0  | 5.3  |
|                     |                                       | Rank                | 6    | 8    | 4    | 5    | 6    | 6    | 6    | 7    | 6    | 6    | 8    | 7    |
|                     | Total                                 | Activity Centrality | 18.1 | 14.5 | 26.7 | 11.9 | 17.2 | 11.3 | 11.4 | 12.2 | 17.7 | 0.0  | 8.7  | 14.7 |
|                     |                                       | Rank                |      |      |      |      |      |      |      |      |      |      |      |      |
|                     | Contracting-out Planning              | Activity Centrality | 5.9  | 5.4  | 0.0  | 3.4  | 4.1  | 2.5  | 0.0  | 0.0  | 4.0  | 4.6  | 8.7  | 3.9  |
|                     |                                       | Rank                | 8    | 7    | 7    | 7    | 7    | 8    | 8    | 8    | 8    | 5    | 3    | 8    |
| Total               | Partnership for a Particular Project  | Activity Centrality | 16.9 | 19.2 | 28.9 | 20.3 | 15.6 | 26.3 | 29.3 | 15.6 | 15.3 | 16.9 | 8.7  | 18.9 |
|                     |                                       | Rank                | 3    | 3    | 2    | 3    | 3    | 2    | 1    | 3    | 2    | 2    | 3    | 3    |
|                     | Total                                 | Activity Centrality | 22.8 | 24.6 | 28.9 | 23.7 | 19.7 | 28.8 | 29.3 | 15.6 | 19.4 | 21.5 | 17.4 | 22.8 |
|                     |                                       | Rank                |      |      |      |      |      |      |      |      |      |      |      |      |
|                     | Total                                 | Activity Centrality | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |
|                     |                                       | Rank                |      |      |      |      |      |      |      |      |      |      |      |      |

The measure of activity centrality displays somewhat different results in the Pittsburgh region. As already shown in <Table 5-14>, the most common policy activity pursued by local governments is to receive technical assistance from other organizations in contact. Overall, 27.3% of all collaborative activities are put into this category, and all actors except special districts and public/private partnerships are most frequently called upon by local governments that expect technical solutions for existing policy problems from those organizations. Sectoral differences are also clear in a sense that the relative significance of public organizations (Other cities, county, special districts) are comparatively lower (22.4, 26.6, 0.0, respectively) than organizations from other sectors such as planning consortia, economic development corporation, and chamber of commerce (30.5, 30.3, 36.3, respectively).

While an engagement in a formal partnership is as common in Pittsburgh as in Minneapolis, activities related to integration of the policy process (Joint Policy Making and Joint Policy Implementation) were substantially less reported there (22.5% in Minneapolis vs 14.1% in Pittsburgh).

These results prove the usefulness of the modal approach in explaining collaboration. Recall the graphical expression of regional governance in the theoretical part of this dissertation. I argued that mode of collaboration is the outcome of the interactive effects of structural and procedural attributes of regional governance. The Minneapolis and Pittsburgh regions represent the mode of coordination and cooperation respectively in accordance with endogenous characteristics. In a coordinated mode of governance, the pattern of inter-organizational collaboration is defined as more of rule-following, while the cooperative mode of governance tends to produce cost-benefit sensitive decisions on collaboration. Concerning the fact the relations among public organizations such as cities, counties, and special districts are primarily influenced by formal rules and standard procedures, the frequency of formal engagement in collaboration by public organizations found in Minneapolis is quite understandable; communications and cooperation among these organizations are often regulated or required by state legislature, as shown in the last chapter. With little possibility of intergovernmental intervention, municipalities in the Pittsburgh region put more weight on local autonomy and discretion so that formal agreements that may harm jurisdictional independency can be strategically avoided.

Of course this statement is only valid in the comparison of these two cases. Not until more local governments from other metropolitan regions are systematically compared and evaluated, can we really know whether municipalities in Pittsburgh are individualistic.

In sum, as with the network measure of actor centrality, the distributions of activity centrality are clearly different in the two regions. In general, networks are created for policy integration in Minneapolis, in which financial and personnel resources are more easily shared. In contrast, Pittsburgh networks are found mostly in non-essential policy collaboration such as with technical assistance. Although still substantial, formal policy integration never reaches the level that Minneapolis policy networks operate at. Resource exchanges are also comparatively dormant, and even networks for one-time collaborative partnerships for a particular project are slightly less reported than in Minneapolis.

How can we utilize these two measures of network centrality most effectively? The next section wraps up the observations and descriptions from the modal approach to governance and collaboration.

## **5.4 CONCLUSION: NETWORK ANALYSIS IN THE FIELD OF REGIONAL GOVERNANCE**

Extending the explanatory analyses on the extent of inter-organizational collaboration, this chapter aimed to show that the patterns of collaboration are also inherently different in two regions. The results remind us of the modal approach to governance and collaboration. We already empirically proved that the coordinated mode of governance is more strongly associated with inter-organizational collaboration than the cooperative mode of governance. But we left the question of how each mode of governance differently structures collaboration among organizations unanswered. The results presented above provide the answer by characterizing the network connections built into the two regions. The modal approach to governance plays a central role here as well by providing the theoretical background for the descriptive network analyses.

Three network-oriented questions were raised regarding ‘how’ the patterns of collaboration are different. The first question was about identifying major network participants,

and it was answered by two related but different measurements of relative importance of network participants. Although the results from the two measures are not identical, it is possible to conclude that the inter-organizational relationships in Minneapolis are more regionally and horizontally integrated for two reasons: first, the Metropolitan Council seems to absorb a large part of the role of state government which is distinctively well observed in the Pittsburgh region, and second, neighboring cities take the most significant role in local issues, both as participants in development plans and network entrepreneurs or network brokers. The pattern of relationships in Pittsburgh is much less dominated by one particular actor. County government replaces the position that Metropolitan Council has in the Minneapolis region, and councils of governments emerge as the most central network provider. The Southwestern Pennsylvania Commission as a regional MPO plays a quite limited role in Pittsburgh, which partly represents the weak political and cultural integration at the regional level.

Measures of dyadic and triad network clusters confirm the descriptive results in more detail. The measurement of actor centrality shows other cities are the most significant network partners regardless of policy activities in the Minneapolis region, while county governments become the most active network participants in Pittsburgh.

Finally, measures of activity centrality display the differences in objectives of collaboration in the two regions. The hypotheses from the modal approach were proved in the sense that formal policy integration and resource exchanges take place more frequently in the Minneapolis region while short-lived and non-essential cooperation represents the pattern of relationship in the Pittsburgh region.

Despite some limitations inherent, I could identify the important network actors in various policy activities and successfully address the different structure of inter-organizational relationships depending on region and policy activity. The regional differences in actor and activity centrality emphasized above are particularly important because this is significant practical information which can be utilized by municipal managers or any persons who seriously consider strategic perspectives on regional economic development policy-making. The network perspective permits strategic managers to take advantage of opportunities presented by the structural arrangement of networks so that they can significantly decrease transaction costs and fully appreciate structural advantages as network entrepreneurs at the same time.

A network system is not a panacea. Its methodological and practical value may be exaggerated, but we cannot argue that it has provided useful information for us. The catchphrase of 'Compete Globally and Flourish Locally (Dodge, 1996)' seems to well represent the conclusions obtained from my network analysis. Only regions which have the wisdom to build a sustainable network into the economic development process have a chance to accomplish what the catchphrase is promoting. I argue that as public organizations are more participatory in development activities and local networks are bolstered by credible commitments by participants, collaboration on economic development will more efficiently function.



## 6.0 MAKING SENSE OF METROPOLITAN REGIONS

In the last two chapters, we have identified the determinants of inter-organizational collaboration and described the patterns of network arrangements in the Minneapolis and Pittsburgh regions. Although both analyses are independent in terms of research objectives and main methodologies, they are in fact very closely related since both analyses are built on the micro view of regional governance. Accordingly, individual choices (Chapter 4) and network relationships among these individuals (Chapter 5) were taken as major research subjects and units of analyses.

This chapter takes the opposite direction. The main purpose of this chapter is to emphasize the differences in the regional governance of Minneapolis and Pittsburgh at the macro level, enough for a certain level of systemic categorization to be generated. Instead of delving into causal explanation, this chapter begins with building descriptive models of regional governance. All measures and indexes are obtained at the group level, which indicates the level of analysis of this study.<sup>29</sup> From this perspective, the metropolitan region is not what is made by its constituents' choices but a governing entity, as an 'organic whole' consisting of multiple dimensions. To make sense of the idea of 'region', it is thus necessary to fully understand these dimensions and systemize them into models of governance.

This chapter will end with a presentation of two models of regional governance, based on the careful empirical observations of the regions of Minneapolis and Pittsburgh.

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<sup>29</sup> If the unit of analysis was the single local municipality, inter-organizational collaboration would be influenced by the level of regional integration. However, in a context where we have only two cases, building causal relationships between two variables is not only impossible but also irrelevant.

## 6.1 REGIONS OF TWO KINDS

One of the major findings presented in this dissertation is the regional variations in the four indexes which were created to measure the level of horizontal and vertical policy integration in the regions of Minneapolis and Pittsburgh. The variations in these indexes display quite interesting results with regards to regional governance. <Table 6-1> summarizes mean values for the four indexes.

**Table 6-1. Integration Indexes and Collaboration Index**

|                            | Unweighted |      | Weighted |       |
|----------------------------|------------|------|----------|-------|
|                            | MN         | PA   | MN       | PA    |
| Regional Integration Index | 4.11       | 0.86 | 5.16     | 0.99  |
| State Integration Index    | 4.09       | 4.36 | 5.24     | 5.26  |
| Federal Integration Index  | 2.22       | 2.32 | 2.56     | 2.67  |
| Collaboration Index        | 14.47      | 9.25 | 19.73    | 12.86 |

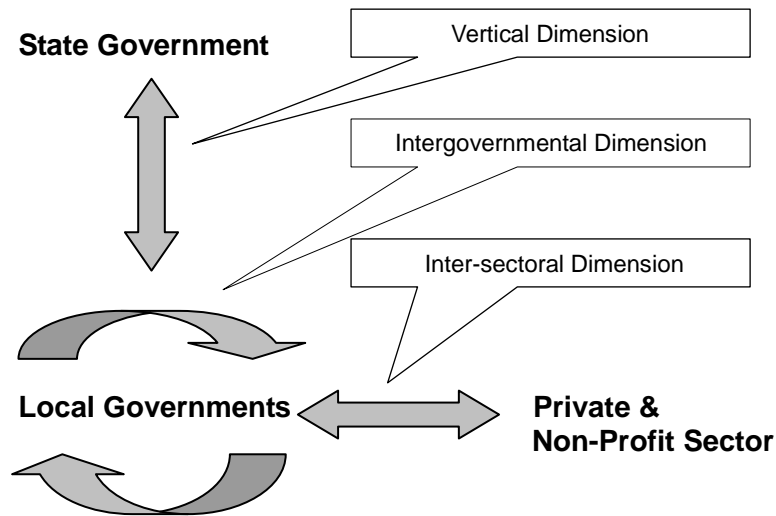
The most distinctive observations in <Table 6-1> are first, the possible covariation of collaboration and regional integration index, and second, similar levels of policy integration at state and federal levels across regions. Given that there is almost no variation in the state and federal integration indexes, regional integration index (RI) seems to be the only factor that may engender the variation in the collaboration index (CI) or vice versa. As we compare only two cases, an explanatory mode of analysis is neither appropriate nor possible. Therefore, I decided to use a case-oriented method, where descriptions of significant social factors become the primary research objectives, instead of striving to prove hypothesized causal statements. Strategically this requires us to delineate covariation of regional RI and CI in a more sophisticated manner, and to explore the sources of this covariance in the framework of multiple dimensions of regional governance.

## 6.2 THREE DIMENSIONS OF REGIONAL GOVERNANCE

While the modal approach in chapter two correctly recognizes the multiplicity of dimensions of governance, it does not address other kinds of dimensional characteristics inherent in the structural aspect of regional governance. The structural dimension was conceptually defined as the level of fragmentation and empirically measured as the number of neighboring local municipalities in chapter four.

However, not only does the level of structural fragmentation matter to the mode of regional governance but also the vertical, intergovernmental and inter-sectoral characteristics of metropolitan regions significantly influence regional modes of governance.

Miller (2008) defines three structural dimensions of regional governance. The vertical dimension involves the fundamental relationship between a state government and the constituent local governments within its jurisdiction, while the horizontal dimension involves the relationship between the local governments within a metropolitan area.



**Figure 6-1. The Three Dimensions of the Structure of Regional Governance**

The third is also horizontal but involves the fundamental relationships between important constituent groups within a metropolitan area such as civic groups and institutions, private

businesses acting in the public domain, and mobilized citizens acting in a wide variety of capacities.

From this conceptualization of regional governance, metropolitan regions are recognized as a structural web on which regional actors are connected and interrelated. But in the absence of a formal governing body to represent regional sovereignty, it is still hard to characterize 'region' as a real political entity.

Several attempts have been made to understand the ambiguities residing in regional politics. While some of these exclusively focus on one dimension, others make use of multiple dimensions for better description. The next section will introduce some of these cataloging approaches to regional governance.

### **6.3 DIFFERENT REGIONS, DIFFERENT STRATEGIES**

Most cataloging approaches to regional governance do not address the multiple dimensions inherent in regional governance shown in <Figure 6-1>. For example, although Miller's Metropolitan Power Diffusion Index (MPDI) is one of the most accurate measures of degree of decentralization of metropolitan regions, it only measures the intergovernmental dimension of regional governance. Likewise, Hitching (1998)'s, Miller (2002)'s, and Frug (1999)'s categorizations of regional governance are all only concerned with the intergovernmental dimension.

Savitch & Vogel (1996) developed a continuum of metropolitan regions that range from highly centralized and government-centric to highly decentralized and less government-centric (Miller, 2008). They incorporate the inter-sectoral dimension of regional governance with the intergovernmental dimension. The intergovernmental components constitute single-tier, two-tier, and interlocal agreements, while the inter-sectoral dimension is represented by public/private partnerships.

Hamilton et al (2004) focus on describing the interactive effects of the vertical dimension and the intergovernmental dimension of regional governance on long-term economic competitiveness. Using the centralized index developed by Stephens (Stephens, 1977; Stephens

& Wikstrom, 2000), they measure how much local discretion is available and assess the impact of structure on the quality of life in the metropolitan area. This study was based on the intuition that greater state centralization would improve the prospects for, and the effectiveness of, regional activity (Hamilton et al, 2004: 159).

They also provide a conceptual framework that integrates vertical integration and horizontal fragmentation at the metropolitan level. The results suggest that a combination of a decentralized state and a centralized metropolis would produce the highest economic competitiveness at the regional level, while a decentralized metropolis located in a centralized state would tend to show lowest competitiveness. They conclude by arguing that “Governance structures do not create a form of economic determinism, but they do affect the long-term capacity to adapt. The conditions of competition change - and regional economies need to change with them – our governance, and political systems can either help or hinder this flexibility (Hamilton et al., 2004: 169).”

Analyzing the two regions of Minneapolis and Pittsburgh from their perspective is beneficial for several reasons. First, in spite of possible inaccuracies inherent in the Stephens index, it gives a clue as to how to integrate the vertical dimension into models of regional governance. Second, it clearly proves that there are interactive effects that the dynamic relationships between the horizontal and vertical structural dimensions are collectively generating. Based on this idea, we can articulate the pattern of regional governance in Minneapolis as ‘integrated collaborative governance,’ while the Pittsburgh region can be defined and ‘isolated’ or ‘siloe’d’ collaborative governance. Both models of regional governance incorporate all three structural dimensions of regional governance in which each region displays distinctive patterns of inter-organizational interactions and collaboration. However, we do not have enough empirical evidence to support the effectiveness of these models. Acknowledging this limitation, I will argue in the next section that by adding procedural aspects of regional governance to <Figure 6-1>, we can possibly provide appropriate evidence to distinguish the two models of regional governance.

## 6.4 REGIONAL GOVERNANCE AT WORK: SOME DESCRIPTIONS

Although the dimensional framework illustrated in <Figure 6-1> improves our understanding on regional governance to a great extent, it has fundamental limitations as well. First, in this framework we are not able to perceive metropolitan regions as real structural entities. Regional characteristics are possibly recognized only after we analyze all three dimensions thoroughly. But from the perspective that sees regions as organic wholes, metropolitan regions can be recognized independently as a structural reality.

A second problem resides in the framework's single-dimensionality. It correctly depicts that regional governance comprises multiple structural dimensions including vertical, intergovernmental, and inter-sectoral. However, not only do these multiple structural dimensions determine regional governance, but also political interactions among regional actors either reinforce or disintegrate the patterns of regional governance. If we do not appropriately reflect this procedural dimension of regional governance, any conceptual framework is a partial description of reality at best.

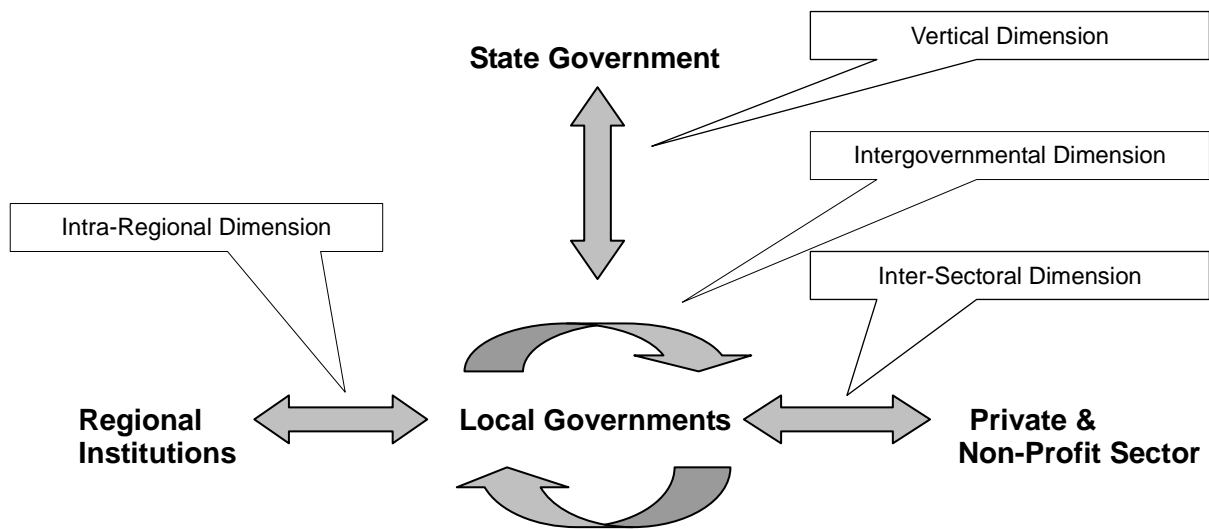
This problem is more or less empirical, and comes as no surprise given the fact that there is little empirical data accumulated measuring structural as well as procedural dimensions of regional governance. Where there is no data, their relevance is questionable and their usefulness is extremely limited.

All three of these issues lend support to the fact that we need to reconceptualize the framework of regional governance. By incorporating procedural aspects of regional governance, as was already attempted in chapter 2, the framework of regional governance becomes more accurate as well as more comprehensive.

In the following, I decide to add the intra-regional dimension to existing structural arrangements of regional governance. Even though it is weak, the metropolitan region itself has the capacity to advance its own policy objectives in some cases and negotiate with various actors within its aerial boundary.<sup>30</sup> In this sense, I define metropolitan region as another level of governance which often effectively influences local decisions.

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<sup>30</sup> Metropolitan Planning Organizations (MPO) are the most active useful regional institutions.



**Figure 6-2. The Eight Dimensions of Regional Governance**

Another important issue has to be raised here. As already mentioned in chapter two, exclusive dependence on the structural dimension of regional governance is methodologically incorrect and leads to incomplete empirical results. For our two regions of Minneapolis and Pittsburgh, we have limited sources of empirical data that do not allow a comprehensive comparison of the structural dimensions of the two regions. Additionally we are already aware that the procedural aspect of governance is as significant as the structural one, particularly in regional governance studies. For instance, my measures of collaboration and integration may look like they represent the structural arrangement between dimensions of regional governance, but what they really measure is purely procedural aspects, by which we are informed to what extent constituents of metropolitan region are vertically or horizontally integrated. Accordingly, it would be more accurate to describe regional governance as consisting of four structural dimensions and the same number of procedural dimensions.

### 6.4.1 Vertical Dimension

The first structural dimension of regional governance is the vertical relationship between local governments and state government. State government is an integral part of regional governance because local governments, which are the building blocks of metropolitan regions, are creatures of their respective state legislatures. And because it is each state making decisions about the purpose and nature of the local governments within its boundaries, the American system could be said to have fifty different vertical approaches (Miller, 2008).

There is no doubt that the two states of Minnesota and Pennsylvania are clearly distinguished in every aspect of governance. <Table 6-2> rearranges the measures of vertical relationships in the two regions and compares the extent to which the two regions are vertically integrated.

**Table 6-2. Vertical Dimension of Regional Governance**

|                                       | <b>MN</b> | <b>PA</b> |
|---------------------------------------|-----------|-----------|
| Stephen's Centralization Index (1957) | 34.1      | 44.9      |
| Stephen's Centralization Index (1995) | 50.9      | 62.4      |
| State Integration Index (Unweighted)  | 4.09      | 4.32      |
| State Integration Index (Weighted)    | 5.24      | 5.21      |

According to the Stephens' index in <Table 6-2>, both states have been significantly centralized for three decades, from 1957 to 1995.<sup>31</sup> The state of Pennsylvania has always been more centralized than Minnesota. This is quite an interesting result when we consider the cultural approach to regions articulated by Elazar (1970). From his observations, the individualistic culture of Pennsylvania should work against centralization of services, financial responsibility, and labor intensity, while the moralistic culture of Minnesota should allow for more state

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<sup>31</sup> This tendency was stimulated by three key factors: (1) the states becoming much more important as service-providing entities; (2) a federal court ruling of the 1960s that referred to the principle "one man, one-vote," which reduced the representation of central cities in state legislatures while increasing that of suburban areas; and (3) federal requirements for the administration of federal grant funds (Stephens & Wikstrom, 2000: 124).



intervention in the life-style functions of local governments, which would need relatively high centralization.

The incompatibility between theoretical expectations becomes more complicated when we look this study's measure of intensity of policy integration at the state level. It is surprising that the two regions scored almost the same in state integration index as the significant differences in Stephens' index do not allow for such a convergence of the regional integration index. Looking in more detail, the unweighted measure in the fourth row demonstrates that municipalities in the Pittsburgh region are more vertically integrated than those in Minnesota, although the difference is marginal. However, when I give some weight to the activities that involve local policy adjustments to regional rules and standards, the difference disappears, and the Minneapolis region even surpasses Pittsburgh with respect to vertical integration. This seems to indicate that municipalities in Minneapolis are involved more in adjustment-seeking activities with the state government. As a result, we may argue that the vertical dimension in the two regions cannot be accurately described with the indexes at hand. Nevertheless, it seems safe to say that both regions are constantly centralizing, and the state of Minnesota is more involved with policy integration activities while the state of Pennsylvania is more connected with its constituent local governments by informal and technical relationships.

#### ***6.4.2 Intergovernmental Dimension***

The second structural dimension of regional governance is intergovernmental relationships between local governments. In this section, local governments refer to general purpose governments, special districts, and county governments. Various studies have developed measures, among which Miller (2002)'s Metropolitan Power Diffusion Index (MPDI) provides the most systematic knowledge of the structure of intergovernmental dimension.

MPDI basically measures the political effects of structural fragmentation (Hamilton et al., 2004: 160), or the distribution of authority between local governments (Miller, 2008). It is particularly helpful in identifying regional variations in the United States and the changing nature of the institutional relationships between governments in a metropolitan area (Miller, 2008). Mathematically, the Miller scale generates a number from 1 to infinity. If a metropolitan region had one government that spent 100% of all local government expenditures, its score

would be 1. As the number of governments and resulting diffusion of expenditures increases, so does the score (Hamilton et al, 2004: 161).

The information presented in <Table 6-3> reveals that in both regions structural fragmentations have intensified. We already know that compared to other regions, both regions are highly fragmented, ranked at 5<sup>th</sup> (Pittsburgh) and 7<sup>th</sup> (Minneapolis) out of the 311 metropolitan regions in 1992 (Miller, 2002). We can argue from this observation that the two regions are comparatively similar in the intergovernmental dimension of regional governance.

**Table 6-3. Intergovernmental Dimension of Regional Governance**

|  | <b>MN</b> | <b>PA</b> |
|--|-----------|-----------|
| MPDI (1972)  | 8.53      | 10.68     |
| MPDI (1992)  | 9.36      | 11.57     |
| Intergovernmental Collaboration Index (Unweighted) | 8.40      | 3.96      |
| Intergovernmental Collaboration Index (Weighted)   | 12.07     | 5.37      |

However, this is not necessarily the end of the description. According to my collaboration index, the two regions are fundamentally different from the intergovernmental perspective. The Intergovernmental Collaboration Index (ICI) was derived from the collaboration index and computed to measure only intergovernmental collaborations among general purpose governments, special districts, and county governments. According to this measure, the extent of interaction and collaboration between local governments is significantly higher in the Minneapolis region than in Pittsburgh. This is a very important fact that the structurally-oriented measure such as MPDI is not able to capture.

In sum, two regions of Minneapolis and Pittsburgh can be said to be very similar in terms of structural fragmentation. However, as similar as they may be, the two regions have very different characteristics, which are well represented in the intergovernmental collaboration index. Intergovernmental collaboration in the Minneapolis region is more than twice as that in the Pittsburgh region. Therefore, structural fragmentation cannot be the only measure of intergovernmental dimension of regional governance.

### 6.4.3 *Inter-Sectoral Dimension of Regional Governance*

The next dimension is closely related to the second, in that it represents the complementary set of intergovernmental interactions. The inter-sectoral dimension involves public-private, public-nonprofit, and private-nonprofit relationships. However, this study does not include the private-nonprofit relationship because first, our primary concern is to identify the pattern of relationships between local governments and organizations from other sectors, and second, private-nonprofit relationships were not relevantly measured by the collaboration index.<sup>32</sup>

**Table 6-4. Inter-Sectoral Dimension of Regional Governance**

|   | <b>MN</b>   | <b>PA</b>   |
|---|-------------|-------------|
| Inter-Sectoral Collaboration Index (Unweighted) | 6.16 (3.78) | 4.92 (4.32) |
| Inter-Sectoral Collaboration Index (Weighted)   | 7.69 (4.18) | 6.36 (5.71) |

<Table 6-4> presents some interesting facts regarding inter-sectoral collaboration in the two regions. When regional institutions are included as a non-profit organization, the Minneapolis region shows a higher level of inter-sectoral collaboration, but not as much as in the intergovernmental case. However, there could be a debate about the sectoral characteristics of regional institutions. We selected Metropolitan Planning Organizations (MPOs) as the primary regional institutions in both regions, the Metropolitan Council in Minneapolis and the Southwestern Pennsylvania Commission in Pittsburgh. The SPC is indeed a non-profit council of governments operating with federal resources. But the Metropolitan Council is more than an ordinary regional MPO, and it works as a regional governing body capable of regulating a wide variety of regional issues such as transportation, land use, environment, regional parks, and waste control. Its legitimacy is grounded in the state legislature, which gave formal authority to

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<sup>32</sup> It should be noted that because the survey recipients were the chief administrative officers of general purpose governments, inter-sectoral collaboration involving county or special districts and organizations from other sectors could not be measured. Accordingly, the intergovernmental collaboration index does not include the relationships between county government and special districts.

the Council. Furthermore, council members are appointed by the governor, which makes them pure public officials who are supposed to serve public interests.

Given this issue, I dropped the Metropolitan Council from the non-public group of organizations and recalculated the inter-sectoral collaboration index. The result is reported in the parentheses in <Table 6-4>, which presents the inter-sectoral collaboration between local municipalities and organizations from sectors except regional institutions.

The results are quite interesting. Whereas there is relatively little change in the Pittsburgh region, the inter-sectoral index in Minneapolis drops significantly, about 60% in the unweighted case, and more than 80% in the weighted case. This demonstrates that the Metropolitan Council in the Minneapolis region plays a central role in inter-organizational collaboration, regardless of its sectoral identity. The other important aspect of this result is that it supports the observations which claim that Pittsburgh has a historical legacy of inter-sectoral cooperation (Jacob, 1996: Jezierski, 1996). In the last case, in which regional institutions are not considered as partners of local municipalities in either region, the Pittsburgh region surpasses Minneapolis in terms of inter-sectoral collaboration. Given the fact that the overall level of collaboration is almost twice as high in the Minneapolis region, this finding was unexpected.

#### ***6.4.4 Intra-Regional Dimension of Regional Governance***

The final dimension of regional governance is intra-regional. While the literature on regional governance has examined multiple dimensions of metropolitan regions, little interest has been given to the intra-regional dimension - the intensity of policy integration of local municipalities at the regional level, or the level of interaction between local governments and regional institutions. The regional integration index (RI) represents the first definition, and the intra-regional collaboration index (RCI) measures the level of interactions between local governments and regional institutions.

The intra-regional dimension gets more complex when we correctly recognize its dual characteristics. The relationships between regional institutions and local municipalities within their boundaries are intrinsically horizontal, given the foundational principle of “Dillons’ Law.” This organizing principle clearly states that no organization except a state has true overpowering authority over local municipalities.

However, more often than not, some regional institutions are given a certain amount of capacity to influence local municipalities' decisions on a wide range of policy issues. Less often are there authoritative regional institutions such as the Metropolitan Council in Minneapolis and the Metro in the Portland region, both of which were created by state legislatures. These sometimes severely intervene in local decision-makings in the field of economic development planning, transportation, and waste control. Although they are hardly general-purpose regional governments, in the policy field they hold regulatory authority, and we can conceptualize the relationship between regional institutions and local governments as hierarchical rather than horizontal.

**Table 6-5. Intra-Regional Dimension of Regional Governance**

|   | <b>MN</b> | <b>PA</b> |
|---|-----------|-----------|
| Regional Integration Index (Unweighted)         | 4.11      | 0.77      |
| Regional Integration Index (Weighted)           | 5.16      | 0.88      |
| Intra-Regional Collaboration Index (Unweighted) | 2.38      | 0.60      |
| Intra-Regional Collaboration Index (Weighted)   | 3.51      | 0.65      |

The regional integration index measures this partial vertical relationship. Given the information in <Table 6-5> we can argue that the Minneapolis region is far more vertically integrated. It is natural that in the absence of any state government-appointed regional authority, the city and county governments in the Pittsburgh region are unlikely to place themselves under the authority of the SPC, its regional MPO. This expected behavior is well documented in <Table 6-5> as well.

The other aspect of the intra-regional dimension is purely horizontal. This dimension is conceptualized by the intra-regional collaboration index, which measures the extent of collaborative activities between regional institutions and local municipalities. Results show that the Metropolitan Council in Minneapolis is a comparatively more vital partner than the SPC.

**Table 6-6. Perceptions of Regional Institutions**

|                             | MN        | PA        |
|-----------------------------|-----------|-----------|
| <b>Contact Agency</b>       | 8 (17.8)  | 16 (21.3) |
| <b>Information Provider</b> | 18 (40.0) | 34 (45.3) |
| <b>Policy Coordinator</b>   | 20 (44.4) | 16 (21.3) |
| <b>Policy Regulator</b>     | 27 (60.0) | 8 (10.7)  |
| <b>Other</b>                | 3 (6.7)   | 2 (2.7)   |

<Table 6-6> informs us of how local administrative officers in the two studied regions perceive regional institutions. Both regional institutions are perceived as contact agencies and information providers to a similar extent in terms of percentage distributions. But the Metropolitan Council is perceived to be a policy coordinator (44.4%) or policy regulator (60.0) more than the SPC is. This confirms the finding in <Table 6-5> that a strong regional authority characterizes the Minneapolis region.

#### ***6.4.5 Additional Evidences: Frequencies of Contact and Methods of Communication***

In addition to the indexes presented above, survey questionnaires also provided information on the frequency of contact of local municipalities with local, state, federal governments and regional institutions. Generally this information confirms the results observed from the collaboration indexes.

<Table 6-7> summarizes the frequency of local governments' contacts with 5 organizations in the two regions. The numbers in parentheses represent the percentage value of each contact. According to this table, 15 out of 45 local municipalities in the Minneapolis region have daily contact with their neighboring local governments, while 10 out of 75 municipalities in Pittsburgh region contact do the same. This observation can be differently put in terms of percentage distribution.

**Table 6-7. Frequencies of Contacts**

|                | <b>Local</b> |           | <b>County</b> |           | <b>State</b> |           | <b>Federal</b> |           | <b>Regional</b> |           |
|----------------|--------------|-----------|---------------|-----------|--------------|-----------|----------------|-----------|-----------------|-----------|
|                | <b>MN</b>    | <b>PA</b> | <b>MN</b>     | <b>PA</b> | <b>MN</b>    | <b>PA</b> | <b>MN</b>      | <b>PA</b> | <b>MN</b>       | <b>PA</b> |
| <b>Daily</b>   | 15(33.3)     | 10(13.3)  | 3(6.7)        | 6(8.0)    | 0(0.0)       | 1(1.3)    | 0(0.0)         | 1(1.3)    | 0(0.0)          | 0(0.0)    |
| <b>Weekly</b>  | 13(28.9)     | 24(32.0)  | 20(44.4)      | 12(16.0)  | 6(13.3)      | 12(16.0)  | 1(2.2)         | 1(1.3)    | 9(20.0)         | 1(1.3)    |
| <b>Monthly</b> | 14(31.1)     | 30(40.0)  | 17(37.8)      | 39(52.0)  | 26(57.8)     | 35(46.7)  | 9(20.0)        | 15(20.0)  | 24(53.3)        | 10(13.3)  |
| <b>Never</b>   | 0(0.0)       | 0(0.0)    | 0(0.0)        | 1(1.3)    | 1(2.2)       | 3(4.0)    | 13(28.9)       | 17(22.7)  | 0(0.0)          | 27(36.0)  |
| <b>Other</b>   | 2(4.4)       | 12(16.0)  | 4(8.9)        | 17(22.7)  | 12(26.7)     | 22(29.3)  | 20(44.4)       | 41(54.7)  | 11(24.4)        | 34(45.3)  |

As there is a different number of observations available for the two regions (45 vs 75), a percentage measure of frequency distribution are a more accurate reflection of reality. Then, half (33.3%) of the local municipalities in Minneapolis have daily contact and almost two thirds (62.2%) of municipalities have regular contact with their neighbors on at least a weekly basis. In contrast, only 13.3 % of Pittsburgh municipalities have daily contact with their neighbors, and only 45.3% of them talk with their neighbors at least once a week. In sum, this table demonstrates that the Minneapolis region has a more active pattern of inter-municipal communication than the Pittsburgh region.

The patterns of contact between municipalities and county governments look quite similar to those of the inter-municipal case. More than half of local governments in Minneapolis contact their respective county governments at least once a week, while the frequency of contact in the Pittsburgh region is less than that.

In contrast, frequency of contact with state and federal agencies shows very similar results to those in <Table 6-7>, which in fact confirm the observation reported in <Table 6-1>. The other fact that distinguishes the two regions is the frequency of contact with regional institutions. As has been recurrently argued, the Metropolitan Council in the Minneapolis region is again shown to be much more powerful and useful than the SPC in Pittsburgh in the table above. While only 14.6% of local governments in Pittsburgh maintain regular contact with the SPC, more than 75% of Minneapolis cities are interacting with the Metropolitan Council on a regular basis.

In sum, a summary of the frequency distributions of inter-organizational contacts confirm that inter-local and intra-regional communication are the major factors that differentiate the two regions in the aspect of inter-organizational relationship.

**Table 6-8. Distribution of Communication Methods**

|                        | Local    |          | County   |          | State    |          | Federal  |          | Regional |          |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|                        | MN       | PA       | MN       | PA       | MN       | PA       | MN       | PA       | MN       | PA       |
| <b>Telephone</b>       | 35(77.8) | 68(90.7) | 44(97.8) | 62(82.7) | 28(62.2) | 61(81.3) | 18(40.0) | 44(58.7) | 31(68.9) | 26(34.7) |
| <b>E-mail</b>          | 38(84.4) | 52(69.3) | 39(86.7) | 43(57.3) | 40(88.9) | 50(66.7) | 23(51.1) | 32(42.7) | 41(91.1) | 24(32.0) |
| <b>Regular Meeting</b> | 31(68.9) | 25(33.3) | 27(60.0) | 11(14.7) | 7(15.6)  | 12(16.0) | 5(11.1)  | 5(6.7)   | 11(24.4) | 10(13.3) |
| <b>Mail/Fax</b>        | 15(33.3) | 28(37.3) | 14(31.1) | 32(42.7) | 18(40.0) | 45(60.0) | 22(48.9) | 39(52.0) | 25(55.6) | 26(34.7) |
| <b>Other</b>           | 5(11.1)  | 9(12.0)  | 0(0.0)   | 7(9.3)   | 1(2.2)   | 9(12.0)  | 1(2.2)   | 2(2.7)   | 1(2.2)   | 8(10.7)  |

<Table 6-8> presents the frequency of communicative methods by which municipal officials contact other organizations. Since the survey questionnaire allows multiple choices, the total number of frequencies does not necessarily represent the number of survey respondents.

Although telephone and E-mail are the primary communication tools regardless of the partnering organization corresponded with, there are some notable regional differences found here as well. The first important finding in this table is that ‘regular meetings’ are far more common in the Minneapolis region, especially in the communications between neighboring municipalities and county governments. Regular meetings are qualitatively different from telephone and e-mail contact because they bring a considerable degree of formality into relationships. In addition, as social capital literature argues, face-to-face contact is far more effective in creating reciprocal norms between actors and decreases transaction costs in the long run. This again confirms that no matter which aspect you consider, the horizontal intergovernmental relations are more formal and integrated in Minnesota.

This second finding supplies more evidence of the active involvement of regional institutions in Minneapolis in local businesses. It is not unexpected regarding the observations



presented throughout this dissertation, but it is still a valuable finding by which we can see in more detail the inter-organizational communication in the two regions.

In sum, the information presented in this section confirms the findings in the previous chapters and supplies additional evidence to the cataloging approach to regional governance. The strong horizontal intergovernmental connections and strength of regional institution characterize the regional governance in Minneapolis, in which formal and face-to-face communication is as common as indirect tool such as mail and telephone calls.

## **6.5 TWO REGIONS, TWO REGIONAL GOVERNANCES**

In this chapter I have scrutinized the two metropolitan regions of Minneapolis and Pittsburgh from both the structural and the procedural dimension of regional governance. As indicated, instead of deriving causal inferences from the dimensions, this chapter focuses on analyzing observed covariation in the regional integration index and collaboration index in detail.

My analytic strategy in this section was to divide the collaboration index into intergovernmental, inter-sectoral, and intra-regional indexes and look for any considerable regional differences in each index. This strategy is based on the idea inherent in the dimensional approach to regional governance that the metropolitan region as a political entity is conceptually meaningful only when every dimensional attribute of the region is independently scrutinized and understood. The belief is that only when we can single out salient dimensional differences then we can possibly argue the source of differences in regional governance as a whole.

Despite some considerable distinctiveness, the vertical and inter-sectoral dimensions do not seem to be dissimilar enough to cause differences in the patterns of regional governance. Stephens' indexes indicate that state intervention would be heavier in the Pittsburgh region, but I find no notable difference in the degree of policy integration at the state level.

Inter-sectorally the two regions show relatively little variance. Considering the differences in overall level of collaboration, the Pittsburgh region's inter-sectoral activity is quite notable, even sometimes surpassing the level of inter-sectoral collaboration of the Minneapolis region.

Structural measures of the intergovernmental dimension display similar results. Miller's MPDI reveals that both regions are highly fragmented. However, we may not claim only from this result that intergovernmental dimension is where the regional divergence comes from.

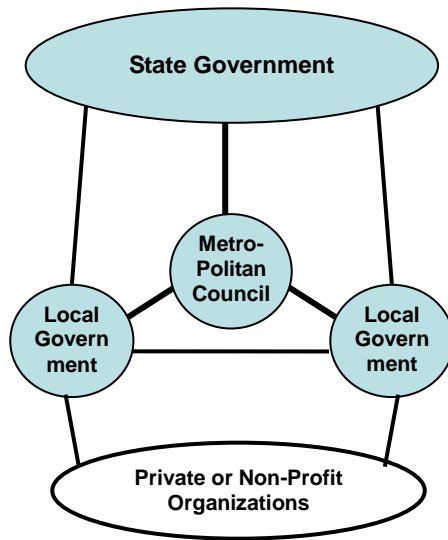
When I assess the extent of intergovernmental collaboration, there emerges a clear regional difference. Horizontal policy interaction between local governments is twice as strong in the Minneapolis region as in Pittsburgh. Given the nature of local governments, we can argue that the strong formal intergovernmental relationship in Minneapolis is the driving force for inter-organizational collaboration or horizontal policy integration.

Similar logic can be applied to the intra-regional dimension of regional governance. I already argued that the intra-regional relationship may not be as real or observable as other kinds of relationships analyzed in this section. However, it is nonetheless a critical dimension of regional governance because it is the only direct measurement of regional governance, and using it we can perceive regions as existing political entities or organic creatures.

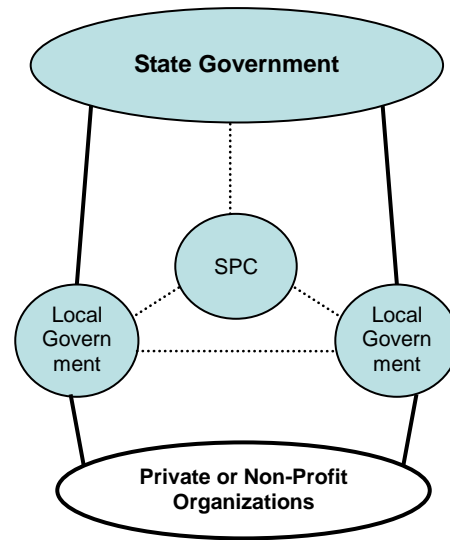
Based on the observations of multiple dimensions of the two regions, two distinctive models of regional governance can be developed. The first model, labeled the integrated model, stands for the regional governance of the Minneapolis region. As demonstrated, local municipalities in this metropolis are strongly connected to diverse organizations from every social sector and highly interactive in most governance dimensions. The strength of relationships is denoted by the thickness of the lines in the <Figure 6-3>.

In the graphical expression of “(b) isolated model of regional governance”, which represents governance in the Pittsburgh region, the conspicuous differences are threefold. First, the frequency and intensity of intergovernmental interactions among local governments are significantly lower than in the Minneapolis region. Second, it is an isolated or siloed model in that even though inter-local communication is not as active as in the Minneapolis case, interaction with state government is still strong and intensive. We can easily expect from this mode that local municipalities would try to adjust or adhere to state policy regulations while they casually ignore their neighbors' preferences or collective benefits at the regional level.

**(a) Integrated Model of Regional Governance**



**(b) Isolated Model of Regional Governance**



**Figure 6-3. Models of Regional Governance**

Third, the role of regional institution, the Southwestern Pennsylvania Commission in this case, is almost invisible in most of the economic development policy process. In comparison to Minneapolis, the regional institution in the Pittsburgh region does not have enough power and resources to initiate a regional approach to economic development. In sum, although the extent of inter-sectoral collaboration is quite comparable in the two regions, these three dimensional differences clearly show the differences between them.

## **6.6 CONCLUSION**

In chapters 4 and 5, the modal approaches to regional governance were empirically tested at the micro level, where it was found that local municipalities' tendencies with respect to collaboration were primary deciding factors that characterized their metropolitan regions collectively.

This chapter, however, provided an alternative view on regional governance. By taking regions as units of analysis, it attempted to capture the information embedded in the aggregate

data on inter-organizational collaboration, which was not available in the analysis from the micro perspective. From this macro level point of view, the two regions have multiple dimensional differences in both structures and political process. I have identified a total of 8 dimensions in regional governance and examined them in detail so that the dimensional distinctiveness of the regions could emerge in a natural manner.

Based on the information obtained from this analysis, two models of regional governance were developed in this chapter. They are expected to provide theoretical guidance for future research. Moreover, the dimensional approach to regional governance is thought to be a significant progress in the study of regional governance. In the integrated model of regional governance, local governments are actively involved with regional actors in all dimensions. In the isolated model, they are only vertically integrated with the state government, while intergovernmental and intra-regional policy integration is quite limited in all dimensions.

In addition, we argue that intra-regional cooperation in the integrated model is the factor that increases the extent of collaboration. We cannot claim this as definitive with only two cases in hand. However, the fact that this relationship may exist can inform regional policy strategies involving economic developments and inter-organizational collaboration. By analyzing more metropolitan regions in future research, we can verify the effectiveness of the dimensional approach to regional governance and specify the strengths and weaknesses inherent in the models of regional governance as well. The analysis presented in this chapter is just the beginning of the long-term research goals of this dissertation.

## **7.0 CONCLUSION**

This dissertation examines how governance structures or modes of governance affect the extent and patterns of inter-organizational collaboration in economic development policy processes in the metropolitan regions of Minneapolis and Pittsburgh. While the importance of metropolitan regions in economic competition is becoming increasingly recognized, their role is not well understood or evaluated.

This dissertation began with creating a conceptual framework of governance by which the modes of governance and features of collective actions could be accurately described. Two main research questions were presented, which guided the empirical analyses, the first related to the determinants of the extent of collaboration, the second centered on defining the configuration of the network relationship in each region.

A variety of existing theories of collective action, governance, and local and regional governance were scrutinized and integrated to enable development of the empirical part of this study. Testable hypotheses were developed from the theoretical speculations about inter-organizational collaboration, and rigorous statistical methods were employed to test these propositions.

This chapter highlights the major findings of this study and discusses the resulting theoretical development of governance and collaboration studies as well as the practical implications.

## **7.1 OVERVIEW OF FINDINGS**

### ***7.1.1 Theoretical Findings***

The first part of this dissertation was devoted to developing an integrative framework of governance, regional governance in particular. It found a fundamental limitation of governance studies in the single-dimensionality of the existing theoretical framework, and pointed out the complexity of the governing process, through which structural as well as procedural attributes of governance contexts are actively intermingled. The majority of empirical studies rely on the structural dichotomy of centralization and fragmentation making it extremely hard to take the procedural aspect of governance into consideration.

Recognizing these limitations, I developed an integrative framework of governance, in which modal approaches to governance phenomena are introduced. In addition to the dimension of structural dichotomy, this integrative framework includes the procedural dimension of aggregation and integration. The interacting effect of the two dimensions made it possible for us to categorize modes of governance graphically.

The modes of competition and command/control are a significant starting point in the modal approach, but their practical applicability is highly doubtful. No structural and procedural reality can meet the tough conditions these two modes require. In this sense, the modes of competition and command/control are regarded as only ideal types to which real governance experiences can be compared.

In contrast the modes of cooperation and coordination were seriously considered as the guiding or organizing principles of governance. According to the structural perspective, network relations are a dominant structural attribute in both modes, while the procedural aspect of each mode is clearly distinguished in terms of logic of action. In the cooperative mode, actors are participating in governing networks because their participation is expected to decrease transaction costs, increase net benefits or both. In this sense actors are assumed to be rational decision-makers whose main rationale of action is the logic of consequentiality. Local and regional institutional infrastructures are perceived as one of the factors considered in the cost-benefit calculation from which decisions on collaboration are made and supported.

In the mode of coordination, the roles of institutional structures are interpreted differently. Local actors sometimes make decisions which are incompatible with their interests in favor of collective benefits. Institutional infrastructures are interpreted here as social mechanisms regulating relationships between actors in a governing process. Decisions on collaboration are here influenced by socially constructed rules or norms, rather than sophisticated calculation of individual benefits.

### **7.1.2 Empirical Findings**

#### *7.1.2.1 Determinants of Inter-Organizational Collaboration*

The research question relating to which modes of governance are more effective in fostering inter-organizational collaboration was left to empirical analyses. The metropolitan regions of Minneapolis and Pittsburgh were selected as comparable cases, and these municipalities' behaviors of collaboration were carefully observed. Various types of variables were measured and their significances were carefully estimated. Along with the structural factors such as community characteristics, economic/fiscal factors, and institutional characteristics, this dissertation introduced three procedural variables measuring municipalities' intensities of policy integration at region, state, and federal levels. These variables also measured the influence of cultural factors on local decisions on collaboration. The two metropolitan regions were assumed to have different cultural legacies (Elazar, 1970), but no previous study systemically estimated cultural effects on inter-local collaboration. With appropriate variables measuring the cultural aspects embedded in the policy process, measures of structural effects can be more accurately estimated. This is what the integrative framework of governance contributes most.

Results from empirical analyses were significant for a couple of reasons. First, they proved that the structural perspective on governance is moderately effective in explaining extent of collaboration. The variable of number of neighboring municipalities as the measure of level of structural fragmentation displays negative relationships in some cases. This confirms the results of previous research (Olberding, 2000; LeRoux, 2006; Wood, 2004), where structural fragmentation displayed a negative impact on collaboration.

Other interesting findings come from several dummy variables. Along with a regional dummy that represented the influence of regional cultural and institutional differences, three

other dummy variables were employed. The first dummy captured how an institutional form of government influences the extent of collaboration. My study clearly indicates municipalities with a council/manager form of government are more likely to cooperate for economic development. This result contrasts with one recent study on inter-local joint venture formation (Feiock et al, 2007), in which mayor-council systems are positively associated with local decisions on participation in joint ventures. The difference in the objective of the collaboration may explain this contradiction. But in a context of multiple collaborative policy activities, municipal managers' roles in fostering inter-organizational collaboration and advancing professional managerialism are particularly salient in the local governance context.

The second dummy variable measured the effect of political and cultural legacy on collaboration. We started with the hypothesis that if a municipality has a history of inter-jurisdictional or inter-sectoral cooperation for a considerable period of time, it may significantly increase the likelihood of collaboration at present. The regression results strongly support this hypothesis.

The final dummy variable in the category of institutional characteristics was about was used to determine whether local municipalities have adopted a performance measurement system. This variable was not always statistically significant but sometimes showed marginal significance. We can argue that a built-in performance measurement system is generally positively associated with a tendency towards collaboration for a local municipality. We can also infer from this result that the more professionally managed the internal affairs of local government, the more it will pursue a collaborative strategy in economic development.

It was found that Economic or Fiscal factors are generally unimportant in explaining collaboration, except at the relative poverty level. This confirms the need-based theory of collaboration, which states that municipalities with serious inequality problems are more likely to search for resources located outside of their jurisdictions.

Probably the primary finding of the empirical analyses would be the effectiveness of procedural variables in explaining inter-organizational collaboration. Despite the difficulty in capturing procedural aspects of governance, three variables that represent the intensities of policy integration to regional, state, and federal levels were successfully measured. Among them, regional and state integration indexes were proven to be highly significant factors in influencing local decisions on collaboration. Especially provided that the overall intensities of policy



integration at the state level is almost identical in the two regions, we can strongly argue that the very factor fostering horizontal collaboration is the level of regional integration of local municipalities. The theoretical speculations of near-decomposability and market exchange mechanisms turn out to be inaccurate in the context of regional economic development.

Finally, the model specification determined the most powerful regression model of inter-organizational collaboration in economic development, in which regional differences are clearly displayed.

On the whole, I found strong support for the integrative model of regional governance as an appropriate framework for collaborative policy activities. Both procedural and structural dimensions were derived from this conceptual framework, and various variables from both dimensions were proven to be significant. Collaboration can be exclusively explained neither by rational calculation (Feiock et al, 2007) nor by elaborate strategic management (Agranoff & McGuire, 2003). It always entails both aspects when it comes to decisions, which means both logic of consequentiality and appropriateness coexist and interact in the decision-making process.

Although my analyses cannot address all issues regarding relationships between governance structures and collaboration, it could successfully generate an explanatory model of inter-organizational collaboration at local and regional levels.

#### *7.1.2.2 Patterns of Collaboration: Network Analyses on Relationships*

The objective of explaining the extent of collaboration was met and the value of this research project on regional governance is undeniable. However, it also provides valuable information about how collaboration is structured in a particular context and how locational differences affect the patterns of collaboration. This dissertation raises questions about the degree of participation of diverse actors in economic development and how the relationships between these organizational actors are differently arranged in two regions.

The method of network analysis was expected to serve these inquiries best. Even though the extreme complexities of the relationships embedded in metropolitan politics did not allow this study to perform a rigorous network analyses, it still was able to produce valuable results regarding patterns of collaboration. Two kinds of relational data were gathered, and the measures

of actor and activity centrality played a central role in understanding the complexities stemming from countless interactions among local actors.

The first analytic inquiry was to determine the most active participants in comprehensive economic development plans. Even in this simplest measure, patterns of interactions in the two regions of Minneapolis and Pittsburgh appear to be significantly different. In Minneapolis, the participation of neighboring cities is overwhelming in the planning process, while municipalities in Pittsburgh have fairly equivalent partnerships with other cities, county, and state government agencies. The notable difference is the active role of the Metropolitan Council, which partly represents strong regionalized policy process in the Minneapolis region.

The second objective of the network inquiry was to find out who were the network brokers or entrepreneurs. Network brokers play an important role in the formation and distribution of information. By connecting organizations which do not have direct ties with each other, network brokers can advance their interests by leveraging this structural advantage. More than 50% of municipal managers in Minneapolis chose other cities, county, state agencies, and the Metropolitan Region in which neighboring cities as the most important network providers. While neighboring cities, county governments' and state governments' roles as network brokers are held to be significant in the Pittsburgh region, the large role played by councils of governments is quite notable. I argue from this observation that informal networks created by voluntary communication characterize this region.

In order to understand how regional differences affect the pattern of inter-organizational collaboration in detail, two additional units of analyses were utilized- dyadic relationships involving relations between local municipalities and other organizations and triad cluster, which add one more actor to existing dyadic networks. This apparently increases the level of complexity exponentially.

Two measures of actor centrality and activity centrality also highlighted differences in collaborative cultures. First, actor centrality in Minneapolis demonstrated that other cities and county governments are two central actors, regardless of policy activities. The Metropolitan Council followed, and its significance is particularly salient in joint policy efforts. Municipalities in Pittsburgh appear to have developed different kinds of clusters. County governments are most frequently connected with local government. The clear divergence from Minneapolis comes from the active involvement of councils of governments in the economic development policy process.

Councils of governments are particularly densely connected to local government in joint policy-making and implementation. We can argue from this observation that they play catalytic role in formal joint policy efforts.

As chapter 5 summarized, inter-organizational networks in the Minneapolis region are more public-oriented in the sense that there is active involvement by three public organizations: cities, counties, and the Metropolitan Council. In contrast, in Pittsburgh, councils of governments take the place of regional institution, and inter-sectoral partnerships are more significant than in the case of Minneapolis. Economic development corporations and neighborhood associations are more actively participating in networks, while special districts are least frequently sought and connected to local governments.

The measure of activity centrality reported another distinctive aspect of inter-organizational networks in the two regions. Activity centrality illustrated which collaborative policy activity is central to each of 11 organizations. According to the results, 'Engage in Formal Partnership,' 'Partnership for a Particular Project,' and "Pool/Share Financial Resources,' are the three most actively selected activities in general, while networks in Pittsburgh are most frequently structured around the activity of 'Technical Assistantships.' Considering that the activity of short-term 'Partnership for a Particular Project' is also highly significant in Pittsburgh, I conclude that networks in Pittsburgh perform more informal and short-lived collaborative activities than those in the Minneapolis region.

In sum, I argue that the two independent empirical analyses in conjunction prove the effectiveness of the integrative framework of regional governance presented in this study. Explanatory analysis successfully showed the significance of procedural aspects of governance in explaining extent of collaboration. Descriptive analyses of the patterns of collaboration in the two metropolitan regions confirm the effectiveness of the modal approach to governance and collaboration as a theoretical framework. As expected, the Minneapolis region, which was regarded as a champion of the coordinated mode of governance, showed a strong public sector oriented, regional, and formal network patterns. In contrast, network formations in the Pittsburgh region were shown to be more likely to occur around informal, technical, and short-term policy activities, and to be densely connected to non-governmental and non-public organizations such as councils of governments. Purely regional networks were less observed in Western Pennsylvania, where the regional MPO is easily forgotten in the policy process. Instead,

partnerships with organizations such as county and councils of governments are salient, which characterize the network relationships in the Pittsburgh region as sub-regional and less integrated. Along with the hyper-structural fragmentation, the voluntary nature of network participation in Pittsburgh is clear enough to define Pittsburgh as an example of cooperative mode of governance.

We can now safely claim that understanding economic development policy is in fact an understanding collaboration. We then argue that collaboration cannot be appropriately explained without a relevant theoretical model of governance.

Economic development is inevitable for every local government. However, how much have we recently thought of fundamental values such as equity, accountability and stability in the competition for development? As we have recurrently witnessed, economic development often becomes a victim to collective action problems. In this sense economic development should not be regarded entirely as a benefit-maximizing strategy. It should be articulated as a constant search for ‘good governance,’ in which collective action problems can be successfully overcome.

Creating regional institutions may be hard. However, strong regional integration does not emerge automatically. My findings have implications for the role of regional governing agencies in inter-organizational collaboration. Almost everyone argues collaboration is important, but no one knows how to build a collaborative culture in the first place. Additionally, the concept of social capital is no longer a new catchphrase in public and urban administration, but we are still unaware of ‘how to’ create it in the context of local and regional governance. We argue that building or strengthening regional institutions should be considered as a viable policy option for creating collaborative culture. It is true that there are still persistent political obstacles to the regional approach to local issues, but waiting for voluntary collaboration in a context of fragmented political structure is as unrealistic as controlling municipalities’ behaviors for the sake of regional interests. Minneapolis’s experience shows us it is possible to juxtapose the values of collective benefits and local autonomy at the same time. It seems that what we need to do is trigger inter-organizational interaction by any means and provides credibility and stability to local politics by strengthening existing regional institutions.

### *7.1.2.3 Making Sense of Metropolitan Regions*

The final research objective of this dissertation was to build empirically-based models of regional governance. Unlike the studies on inter-organizational collaboration presented in chapter four and five, this analysis takes a metropolitan region as a unit of analysis and delves into the differences in the two regions in both the structural and procedural dimensions of regional governance. Finally, it successfully introduced two models of regional governance, which are called the ‘integrated model’ and the ‘isolated model.’

In Minneapolis, organizational actors are closely interconnected with one another, and the intensity of this relationship is relatively strong. These connections are particularly dense between public sector organizations, and at the center of the relationships is a strong regional institution.

The Pittsburgh region, in contrast, displays a surprisingly different structural as well as procedural arrangement for regional governance. It may look like abundant ‘silos’ that are scarcely connected to each other. In this model, local municipalities are highly independent of one another in terms of horizontal policy integration, while they maintain highly dynamic relationships with state government. The role of the regional institution is fundamentally limited in both formal and informal ways, so it is hardly able to mobilize inter-organizational communication or cooperation on economic development issues. In this type of regional governance, without relative state intervention, the autonomous local governments are more likely to pursue their parochial interests at the cost of collective ones.

So, which model of regional governance works better? I did not attempt to provide a definitive answer to this question, but I would argue that in all respects the integrated region would be able to more easily solve collective action problems and address collective benefits with a lower transaction cost. The empirical support for this argument will follow as more and more regions are fit into my framework of regional governance.

## 7.2 POLICY IMPLICATIONS

Based on the empirical evidence presented above, this study is able to provide policy implications for regional governance and inter-organizational collaboration in the policy field of economic development.

First, this dissertation shows that local governments' decisions on collaborative policy activities in economic development are basically multi-dimensional. Local municipalities decide to take joint actions for different reasons in accordance with their environmental context. It warns policy analysts to be exceptionally cautious when they build forecasting models. Since a majority of policy analysis instruments have been developed based on the assumption of rationality, they are not capable of policy decisions derived from other logics of actions. For example, as discussed in chapter 2, policy analysts cannot correctly comprehend the decisions made by logic of appropriateness with their rationality model of policy analysis. This may look like a small problem; however, even a small mistake in anticipation of future interactions between local governments in the condition of competition would result in a critical loss in the distribution game of scarce resources.

Second, the results emphasize that economic development policies are heavily influenced by characteristics of macro-level environments as well. There is no empirical evidence as to how these contextual attributes directly impact local decisions on collaboration. However, these contextual factors organize interrelationships between actors and determine the long-term capacity for collective entities to adapt to a changing environment. Without knowing macro level influences, we are not able to select appropriate policy instruments for economic development.

Third, it is clear that the effects of local economic development policies are in fact regional, in the sense that they inevitably produce collective results at the regional level. In other words, since economic development policies are integrated horizontally as well as vertically, a decision made in one municipality has both direct and indirect effects on its neighbors and other organizations from multiple social sectors. Therefore analyzing policy effects becomes a matter of understanding the degree of horizontal and vertical policy integration. At the same time, evaluating regional differences with respect to degree of integration has emerged as a primary research objective of economic development policy studies.

Fourth, it should be noted that all collaborative activities related to economic development are essentially different in terms of scope, content, function, and form. Some are more formal and collective and reciprocal while others are more informal, individual and short-lived. Some municipalities prefer long-term joint actions whereas others tend to avoid commitments for future policy interactions. My analyses on inter-organizational collaboration support the idea that the more collaboration is formal and reciprocal, the more it will be intensive and sustaining. Reciprocal and long-term collaboration tends to be supported by formal relationships between public organizations, including various kinds of local governments such as cities, townships, villages, special districts and county governments.

There is no doubt that economic development policy has gained considerable attention from academics and professionals alike. But most studies on economic development policy concentrate their interest on efficiency, effectiveness, and economy of policy outcomes that may maximize parochial local interests, while casually ignoring the importance of collective benefits that increase collective well-being at regional level. This is the reason why a collaborative form of local economic development policy has become critical. It is the fundamental issue that any kinds of economic development policy should address in the future.

### **7.3 LIMITATIONS OF THE RESEARCH AND RECOMMENDATIONS FOR THE FUTURE RESEARCH**

Regional Governance and Collaboration is essentially a complex social phenomenon which requires multiple theoretical frameworks to explain. This dissertation employed both macro and micro perspectives for understanding collaboration related to economic development at the local and regional levels. Although I was able to show significant findings from the analyses at both levels, there are some limitations inherent in this study.

First, at the micro level, there is a generalizability problem. Focusing on the field of economic development would make the analytic instruments such as measures of collaboration and policy integration irrelevant in studying collaboration in other policy fields. For example, collaboration studies have taken the field of public service delivery as a research subject for years. Their measurements of collaboration are a bit different from the one utilized in this

dissertation. In this respect, a serious question of commensurability about the method of measuring collaboration could be raised. Additionally, collaborative activities such as ‘joint policy efforts,’ or ‘share/pool resources,’ are too abstractly defined to capture the specifics inherent in every collaborative activity.

Another concern with respect to measuring collaboration is since partner organizations in collaboration are defined too abstractly, it is hard to point to which particular organization is really significant in economic development. It is recommended that future research should have enough time to identify specific organizations and provide survey recipients with their names as partners in collaboration.

A second problem resides in the unproportional sampling of this study. The limitation of time and resources did not allow me to select as many municipalities as possible, so only 30% of the total municipalities in the two regions were included. Since the samples represent municipalities with a relatively large population size, we cannot confidently argue that conclusions drawn from these samples would be generalizable to all local governments.

There exists a similar methodological limitation in the macro-level analysis. Only two cases as samples present a severe generalizability problem, so it is difficult to apply the conclusions to other metropolitan regions with any certainty. Future research should include more regions to verify the usefulness of the framework of regional governance.

This dissertation raised a large number of questions, and some of them were answered. But while the metropolitan regions of Minneapolis and Pittsburgh are only two regions out of the entire U.S., I believe that the results from this analysis of their situations could engender a wide range of suggestions about regional governance. I also strongly believe that they provide a nice starting point from which other metropolitan regions can begin to search for ‘good governance.’



## **APPENDIX A**

### **SURVEY QUESTIONNAIRES**

#### **SURVEY OF REGIONAL ORIENTATION OF LOCAL GOVERNMENT**

This survey is designed to determine the factors facilitating interorganizational collaboration in local governance and the field of economic development, and evaluate the effectiveness of a regional approach to collaborative activities. Please answer all questions based upon your belief and experience.

All your answers and information are strictly confidential and will not be released. Neither you nor your government will be identified with the data you provide. Thank you for your cooperation.

## QUESTIONS ABOUT YOUR GOVERNMENT

1. Which of the following best describes your local government's primary economic base and focus of your primary economic development efforts? (Please check three and rank them according to their importance;

1: most important)

|   | What is your current economic base? | What is the focus of your economic development effort? |
|---|-------------------------------------|--|
| <b>a. Agricultural</b>  |                                     |  |
| <b>b. Manufacturing</b>   |                                     |  |
| <b>c. Retail/Service</b>  |                                     |  |
| <b>d. Institutional (military, government, nonprofit, universities, colleges, etc.)</b> |                                     |  |
| <b>e. Residential community</b>   |                                     |  |
| <b>f. Tourism/hospitality</b>   |                                     |  |
| <b>g. Warehouse/Distribution</b>  |                                     |  |
| <b>h. Technology/Telecommunication</b>  |                                     |  |
| <b>i. Other ( )</b>   |                                     |  |
| <b>j. Mixture ( )</b>   |                                     |  |

Source: ICMA, Economic Development Surveys

2. Which of the following describes the condition of your local government's economic base (1) during the last three years, and (2) which do you think it will be over the next three years? (Check one in each column.)

|   | Last three years | Next three years |
|---|------------------|------------------|
| <b>a. Rapid Expansion (more than 25%)</b>                   |                  |                  |
| <b>b. Moderate growth (10-25%)</b>                          |                  |                  |
| <b>c. Slow growth (less than 10%)</b>                       |                  |                  |
| <b>d. Economic base is stable – no real grow or decline</b> |                  |                  |
| <b>e. Slow decline (less than 10%)</b>                      |                  |                  |
| <b>f. Moderate decline (10-25%)</b>                         |                  |                  |
| <b>g. Rapid decline (more than 25%)</b>                     |                  |                  |

Source: ICMA, Economic Development Surveys

3. What is your form of government?

Mayor-Council \_\_\_\_\_ Council-Manager \_\_\_\_\_ Other(Please Specify) \_\_\_\_\_

4. Does your local government have a comprehensive development plan?

Yes: \_\_\_\_\_

No: \_\_\_\_\_ (Skip to Question # 7)

5. If yes, what is the year of adoption?

Year \_\_\_\_\_

6. If you do have a comprehensive plan, is your government required to communicate with external organizations in the process of plan development?

Yes: \_\_\_\_\_

No: \_\_\_\_\_

7. Does your local government have an evaluation and performance measurement system?

Yes: \_\_\_\_\_

No: \_\_\_\_\_

8. Has your government *voluntarily* participated in any form of economic development partnership?

(Economic development partnership refers to a formal or informal institution by which multiple public, non-profit and private organizations jointly pursue economic development.)

Yes: \_\_\_\_\_

No: \_\_\_\_\_

9. If yes, when did your government participate in the partnership(s)?

(If your government is related to multiple partnerships, please check all applicable)

Before 1968 \_\_\_\_\_ 1969-1980 \_\_\_\_\_ 1981-1992 \_\_\_\_\_ 1993-2004 \_\_\_\_\_ After 2004 \_\_\_\_\_

10. Which of the following organizations participate in developing your local government's economic development plan? (Check all applicable, and rank them according to their importance, 1; most important).

| Organizations                       | Participation | Rank | Organizations                 | Participation | Rank |
|-------------------------------------|---------------|------|-------------------------------|---------------|------|
| a. City                             |               |      | h. Chamber of Commerce        |               |      |
| b. County                           |               |      | i. Public/Private Partnership |               |      |
| c. State Government                 |               |      | j. Neighborhood Association   |               |      |
| d. Federal Government               |               |      | k. Council of Governments     |               |      |
| e. Special District                 |               |      | l. Metropolitan Council       |               |      |
| f. Planning Consortia               |               |      | m. Other ( )                  |               |      |
| g. Economic Development Corporation |               |      |                               |               |      |

Source: ICMA, Economic Development Surveys

### **Definitions of organizations**

City: Any type of local government you are in contact with, regardless of its distance from your jurisdiction.

State government: All organizations belonging to State governments, e.g. State's Department of Economic Development, State Legislatures, and Governor's Office, etc.

Federal Government: All organizations belonging to Federal governments. e.g. Department of Economic Development, Department of Housing and Urban Development, Environmental Protection Agency, Congressmen or Senators' Offices, etc.

Special District: A governmental organization which provides specialized services only to those persons who live within the specified boundaries.

Planning Consortia: An association consisting of organizations from public, private, and non-profit sectors which primarily collaborate for developing local comprehensive development plans.

Economic development corporation: A non-profit organization whose mission is to promote economic development within a specific geographical area.

Chamber of Commerce: A private voluntary business network which aims to improve the business climate in a locality, typically through business networking, lobbying, and common projects and a selection of business services.

Public/Private Partnership: A formal or informal relationship between local governments and private organizations for joint pursuit of local economic growth.

Neighborhood Association: A voluntary, non-profit organization which represents civic values or a certain type of development interests.

Council of Governments: a voluntary association of county and municipal governments which coordinates economic issues on regional, rather than local level

11. Which of the following organizations helps your local government connect to other organizations? (Check all applicable, and rank them according to their importance, 1; most important).

| Organizations                       | Connection Providing | Rank | Organizations                 | Connection Providing | Rank |
|-------------------------------------|----------------------|------|-------------------------------|----------------------|------|
| a. City                             |                      |      | h. Chamber of Commerce        |                      |      |
| b. County                           |                      |      | i. Public/Private Partnership |                      |      |
| c. State Government                 |                      |      | j. Neighborhood Association   |                      |      |
| d. Federal Government               |                      |      | k. Council of Governments     |                      |      |
| e. Special District                 |                      |      | l. Metropolitan Council       |                      |      |
| f. Planning Consortia               |                      |      | m. Other ( )                  |                      |      |
| g. Economic Development Corporation |                      |      |                               |                      |      |

## QUESTIONS ABOUT COLLABORATIVE ACTIVITIES

Questions in this section ask about your collaborative experiences with diverse organizations in the economic development policy process during last three years.

### **Instructions for questions 12 and 13**

- Look through the second column of the table, which is a list of policy activities, and make a '√' in the first column if your local government is employing that policy activity.
- For each policy activity selected, please check all organizations involved with the selected policy activities by making a '√' in all appropriate boxes provided in the table.
- If you want to add any specific policy activities or partner organizations which are not shown in the table, please specify in the 'other' cell.

### *Questions about Horizontal Collaborative Activities*

12. Please select policy activities your local government has engaged in during the last three years. Then check all participating organizations in the activities you selected.

|  | Partner<br>Policy Activity            | City | County | Special District | Planning Consortia | Economic Development Corporation | Chamber of Commerce | Public/Private Partnership | Neighborhood Association | Council of Governments | Metropolitan Council | Other ( ) |
|--|---------------------------------------|------|--------|------------------|--------------------|----------------------------------|---------------------|----------------------------|--------------------------|------------------------|----------------------|-----------|
|  | Receive Technical Assistance          |      |        |                  |                    |                                  |                     |                            |                          |                        |                      |           |
|  | Engage in Formal Partnership          |      |        |                  |                    |                                  |                     |                            |                          |                        |                      |           |
|  | Engage in Joint Policy-making         |      |        |                  |                    |                                  |                     |                            |                          |                        |                      |           |
|  | Engage in Joint Policy Implementation |      |        |                  |                    |                                  |                     |                            |                          |                        |                      |           |
|  | Pool/ Share Financial Resources       |      |        |                  |                    |                                  |                     |                            |                          |                        |                      |           |
|  | Pool/Share Personnel Resources        |      |        |                  |                    |                                  |                     |                            |                          |                        |                      |           |
|  | Contracting-out Planning              |      |        |                  |                    |                                  |                     |                            |                          |                        |                      |           |
|  | Partnership for a particular project  |      |        |                  |                    |                                  |                     |                            |                          |                        |                      |           |
|  | Other ( )                             |      |        |                  |                    |                                  |                     |                            |                          |                        |                      |           |



### *Questions about Vertical Collaborative Activities*

13. Please select policy activities your local government has engaged in during the last three years.

Then check all participating organizations in the activities you selected.

|  | Partner<br>Policy Activity  | <i>Federal</i>            | <i>State</i>            | <i>Regional</i>             |
|--|---|---------------------------|-------------------------|-----------------------------|
|  |   | <b>Federal Government</b> | <b>State Government</b> | <b>Metropolitan Council</b> |
|  | <b>Seek general program Information</b>                             |                           |                         |                             |
|  | <b>Seek new funding of programs and projects</b>                    |                           |                         |                             |
|  | <b>Seek financial assistance through grants</b>                     |                           |                         |                             |
|  | <b>Seek interpretation of standards and rules</b>                   |                           |                         |                             |
|  | <b>Seek policy guidance</b>   |                           |                         |                             |
|  | <b>Seek technical assistance</b>                                    |                           |                         |                             |
|  | <b>Request Statutory/Regulatory relief, flexibility, or waiver</b>  |                           |                         |                             |
|  | <b>Request change of official policy</b>                            |                           |                         |                             |
|  | <b>Request resolution of conflicts with other local governments</b> |                           |                         |                             |
|  | <b>Other</b><br>( )   |                           |                         |                             |

## QUESTIONS ABOUT INTERGOVERNMENTAL RELATIONS

This section asks about your collaborative experiences with governments at all levels. If you select an answer 'Other,' please specify in the space provided.

### *Questions about intergovernmental relations with neighboring local governments*

14. How often do you communicate with neighboring local governments?

Daily\_\_\_\_\_ Weekly\_\_\_\_\_ Monthly\_\_\_\_\_ Never\_\_\_\_\_ Other\_\_\_\_\_

15. How do you usually communicate with these governments? (Choose all)

Telephone\_\_\_\_\_ E-mail\_\_\_\_\_ Regular Meeting \_\_\_\_\_ Mail/Fax \_\_\_\_\_ Other\_\_\_\_\_

16. Which of the following characteristics would best describe the pattern of your government's communication with your neighboring governments?

Negotiation\_\_\_\_\_ Persuasion\_\_\_\_\_ Command/Control\_\_\_\_\_ Other \_\_\_\_\_

17. How do you describe your relationship with your neighboring governments?

Competitive\_\_\_\_\_ Cooperative\_\_\_\_\_ Command/Control\_\_\_\_\_ Other\_\_\_\_\_

### *Questions about intergovernmental relations with County government*

18. How often do you communicate with the county government?

Daily\_\_\_\_\_ Weekly\_\_\_\_\_ Monthly\_\_\_\_\_ Never\_\_\_\_\_ Other\_\_\_\_\_

19. How do you usually communicate with the county government? (Choose all)

Telephone\_\_\_\_\_ E-mail\_\_\_\_\_ Regular Meeting \_\_\_\_\_ Mail/Fax \_\_\_\_\_ Other\_\_\_\_\_

20. Which of the following characteristics would best describe the pattern of your government's communication with the county government?

Negotiation\_\_\_\_\_ Persuasion\_\_\_\_\_ Command/Control\_\_\_\_\_ Other \_\_\_\_\_

21. How do you describe your relationship with the county government?

Competitive\_\_\_\_\_ Cooperative\_\_\_\_\_ Command/Control\_\_\_\_\_ Other\_\_\_\_\_

***Questions about intergovernmental relations with State government***

22. How often do you communicate with State government?

Daily\_\_\_\_\_ Weekly\_\_\_\_\_ Monthly\_\_\_\_\_ Never\_\_\_\_\_ Other\_\_\_\_\_

23. How do you usually communicate with State government? (Choose all)

Telephone\_\_\_\_\_ E-mail\_\_\_\_\_ Regular Meeting \_\_\_\_\_ Mail/Fax \_\_\_\_\_ Other\_\_\_\_\_

24. Which of the following characteristics would best describe the pattern of your government's communication with State government?

Negotiation\_\_\_\_\_ Persuasion\_\_\_\_\_ Command/Control\_\_\_\_\_ Other \_\_\_\_\_

25. How do you describe your relationship with State government?

Competitive\_\_\_\_\_ Cooperative\_\_\_\_\_ Command/Control\_\_\_\_\_ Other\_\_\_\_\_

***Questions about intergovernmental relations with Federal government***

26. How often do you communicate with Federal government?

Daily\_\_\_\_\_ Weekly\_\_\_\_\_ Monthly\_\_\_\_\_ Never\_\_\_\_\_ Other\_\_\_\_\_

27. How do you usually communicate with Federal government? (Choose all)

Telephone\_\_\_\_\_ E-mail\_\_\_\_\_ Regular Meeting \_\_\_\_\_ Mail/Fax \_\_\_\_\_ Other\_\_\_\_\_

28. Which of the following characteristics would best describe the pattern of your government's communication with Federal government?

Negotiation\_\_\_\_\_ Persuasion\_\_\_\_\_ Command/Control\_\_\_\_\_ Other \_\_\_\_\_

29. How do you describe your relationship with Federal government?

Competitive\_\_\_\_\_ Cooperative\_\_\_\_\_ Command/Control\_\_\_\_\_ Other\_\_\_\_\_

***Questions about intergovernmental relations with Metropolitan Council***

30. How often do you communicate with Metropolitan Council?

Daily\_\_\_\_\_ Weekly\_\_\_\_\_ Monthly\_\_\_\_\_ Never\_\_\_\_\_ Other\_\_\_\_\_

31. How do you usually communicate with Metropolitan Council? (Choose all)

Telephone\_\_\_\_\_ E-mail\_\_\_\_\_ Regular Meeting \_\_\_\_\_ Mail/Fax \_\_\_\_\_ Other\_\_\_\_\_

32. In your opinion, the Metropolitan Council could be described best as

\_\_\_\_\_ Contact Agency

\_\_\_\_\_ Information Provider

\_\_\_\_\_ Policy Coordinator

\_\_\_\_\_ Policy Regulator

\_\_\_\_\_ Other (Please specify) \_\_\_\_\_

33. Which of the following characteristics would best describe the pattern of your government's communication with Metropolitan Council?

Negotiation\_\_\_\_\_ Persuasion\_\_\_\_\_ Command/Control\_\_\_\_\_ Other \_\_\_\_\_

34. How do you describe your relationship with Metropolitan Council?

Competitive\_\_\_\_\_ Cooperative\_\_\_\_\_ Command/Control\_\_\_\_\_ Other\_\_\_\_\_

***Demographic Information***

Name of your Local Government: \_\_\_\_\_

Name of your Position: \_\_\_\_\_

Name of Department: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ Zip Code: \_\_\_\_\_

## **APPENDIX B**

### **COVER LETTER FOR SURVEY**

Dear City Manager

I am writing to ask for your help with research I am conducting with the University of Pittsburgh's Graduate School of Public and International Affairs. This research is evaluating the effectiveness of a regional approach on collaborative policy activities, entitled "Building a Region: A Comparative Study on Governance and Collaboration in Minneapolis and Pittsburgh Regions." My goal of this research is to increase knowledge of local and regional governance and provide applicable information about collaborative management for local practitioners.

Your answer to this survey is very important. The survey questionnaire will ask about your government's experiences of collaboration with other organizations in the policy process of economic development. The responses you provide will be confidential and will not be revealed to anyone who is not associated with this project. Your data will be combined with that of other participating governments and reported as summary data only. Your participation is voluntary, and you may withdraw from this research at any time.

Once the questionnaire is complete, please return it in the envelope provided. No postage is necessary. I would be very grateful if you would return this survey by August 15, 2007. Completing the survey will take approximately 15-20 minutes. And please find a small gift enclosed as a token of my appreciation.

This study is approved by the University of Pittsburgh Institutional Review Board: IRB.  
Please do not hesitate to contact me at (614)886-6602 or JHL7@pitt.edu.

I would be very grateful for your cooperation for this research.

Sincerely

Joo Hun Lee  
Ph.D Candidate  
Graduate School of Public and International Affairs  
University of Pittsburgh



## **APPENDIX C**

### **FOLLOW-UP NOTICE**

Dear Survey Recipient

A questionnaire entitled “Survey of Regional Orientation of Local Government” was mailed to you two weeks ago. I would like to make sure that the survey had delivered to you safely.

If you have returned the survey, thank you very much.

If you received but haven’t completed the questionnaires, I hope you will find time to do so. I would be very grateful if you would return this survey by September 15, 2007. Your participation is valuable and much appreciated.

If you did not received the survey, or have mislaid it, please reply to this mail, [JHL7@pitt.edu](mailto:JHL7@pitt.edu), or contact me at 614-886-6602, and I will send you another copy.

Thank you for your time and assistance

Joo Hun Lee  
Ph.D Candidate  
Graduate School of Public and International Affairs  
University of Pittsburgh

## APPENDIX D

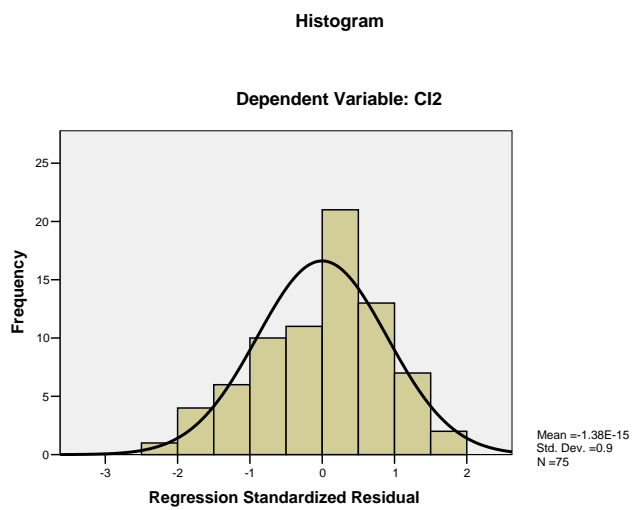
### SUMMARY OF STATISTICS OF STRUCTURAL VARIABLES IN TWO REGIONS (UNREPRESENTED MUNICIPALITIES)

|                                      | MEAN     |          | MAXIMUM  |          | MINIMUM  |          | SD       |         |
|--------------------------------------|----------|----------|----------|----------|----------|----------|----------|---------|
|                                      | MN       | PA       | MN       | PA       | MN       | PA       | MN       | PA      |
| <b>Municipality Characteristics</b>  |          |          |          |          |          |          |          |         |
| Population                           | 35133.76 | 11422.17 | 287151   | 33556    | 5630     | 5103     | 52203.55 | 6569.22 |
| Land Area                            | 19.30    | 18.16    | 38.40    | 67.30    | 2.10     | 0.80     | 12.52    | 16.18   |
| Density                              | 2382.60  | 2336.44  | 10959.96 | 18407.50 | 156.82   | 127.09   | 2203.51  | 3189.61 |
| Number of Neighboring Municipalities | 6.17     | 6.62     | 12.00    | 14.00    | 3.00     | 1.00     | 2.21     | 3.17    |
| Community Heterogeneity              | 7.47     | 4.89     | 30.40    | 59.20    | 1.40     | 0.40     | 5.87     | 8.08    |
| Regional Dummy                       |          |          |          |          |          |          |          |         |
| <b>Economic/Fiscal Factors</b>       |          |          |          |          |          |          |          |         |
| Community Wealth                     | 28667.14 | 19134.85 | 65825.00 | 39204.00 | 20216.00 | 11129.00 | 8918.27  | 4732.90 |
| Community Fiscal Health              | 286.64   | 120.23   | 432.98   | 347.46   | 119.00   | 0.00     | 82.60    | 79.11   |
| Community Social inequity            | 4.32     | 10.85    | 15.60    | 29.40    | 0.90     | 3.50     | 3.00     | 6.19    |

## **APPENDIX E**

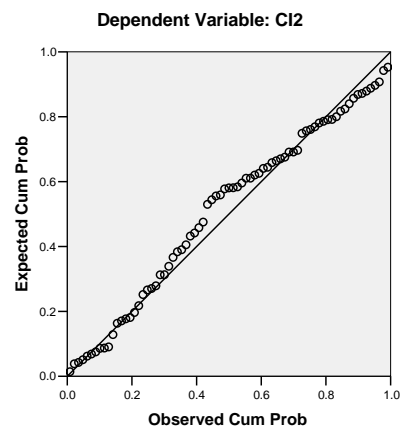
### **FIGURES FOR CHAPTER 4**

## Appendix E-1. Pittsburgh: Unweighted

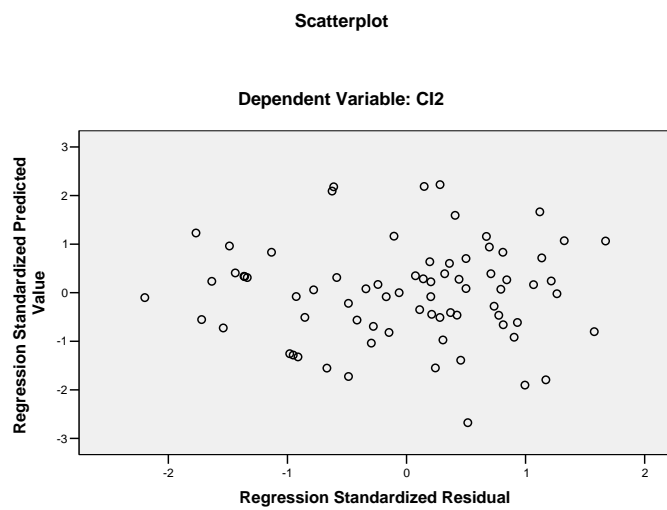


## Appendix E-2. Pittsburgh: Unweighted

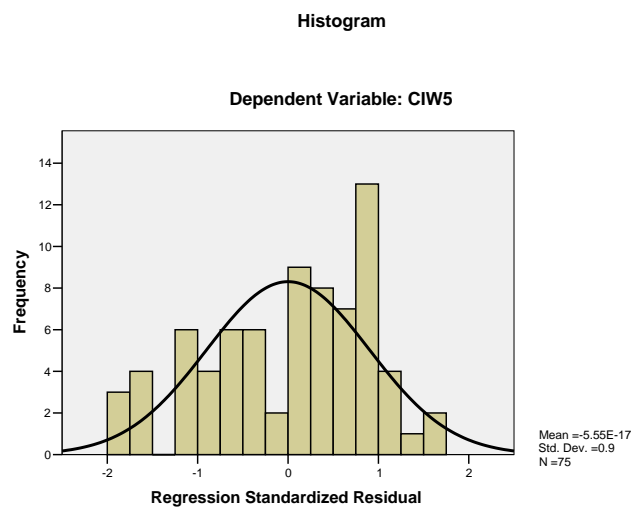
**Normal P-P Plot of Regression Standardized Residual**



### Appendix E-3. Pittsburgh: Unweighted

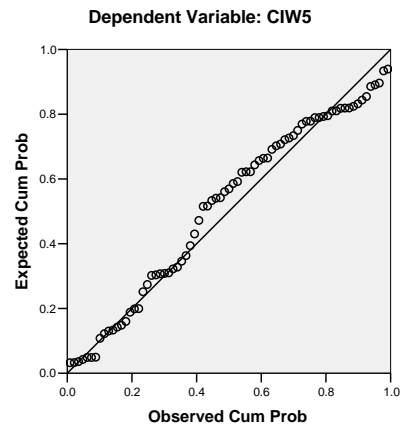


### Appendix E-4. Pittsburgh: Weighted



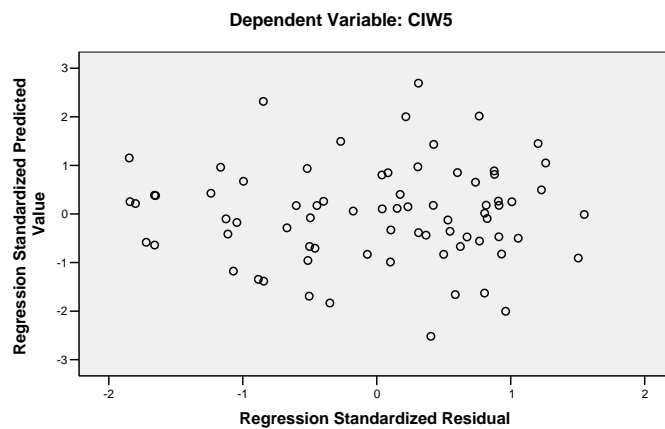
## Appendix E-5. Pittsburgh: Weighted

Normal P-P Plot of Regression Standardized Residual

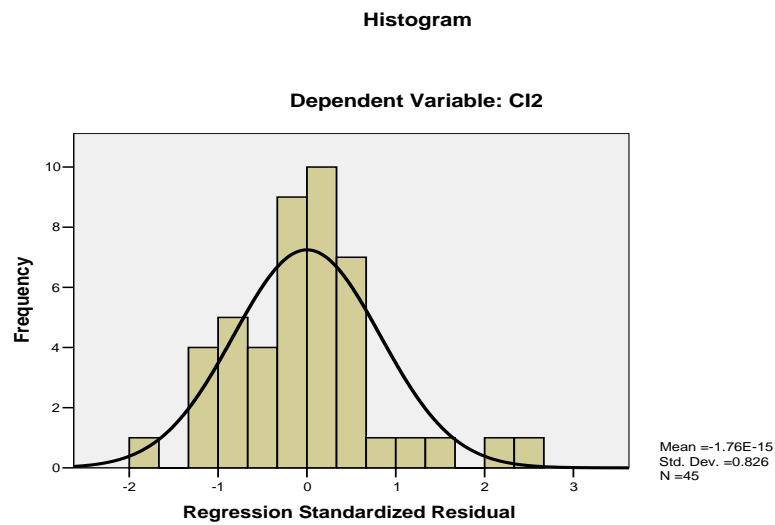


## Appendix E-6. Pittsburgh: Weighted

Scatterplot

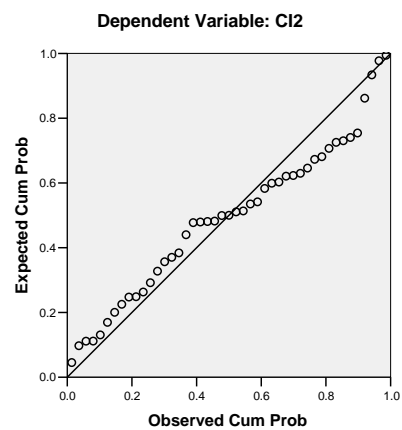


## Appendix E-7. Minneapolis: Unweighted

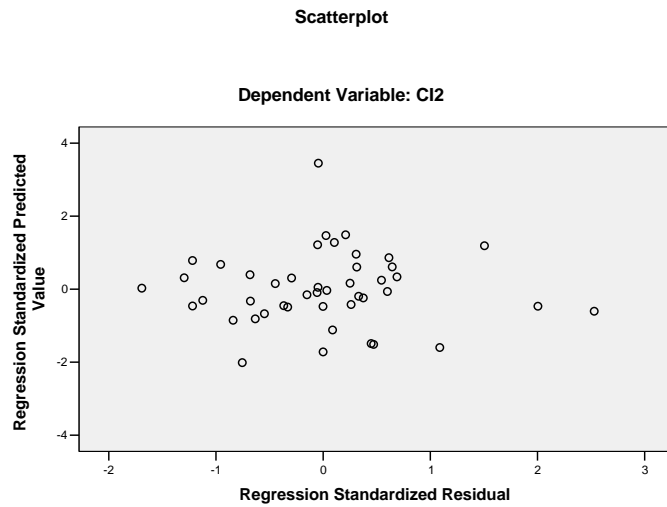


## Appendix E-8. Minneapolis: Unweighted

Normal P-P Plot of Regression Standardized Residual

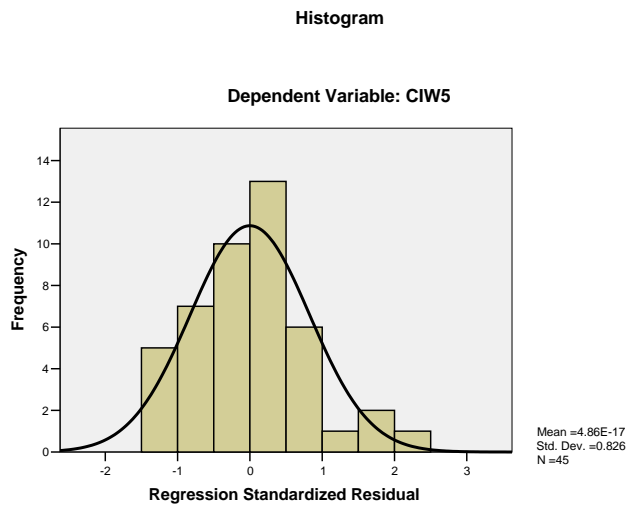


## Appendix E-9. Minneapolis: Unweighted



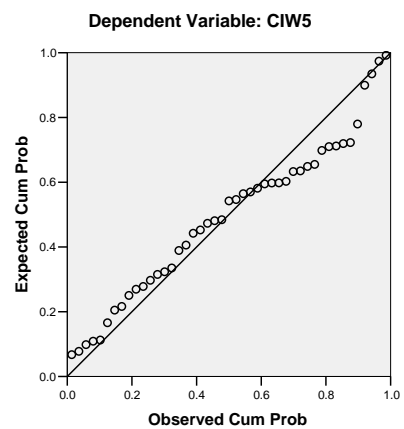
## Appendix E-10. Minneapolis: Weighted



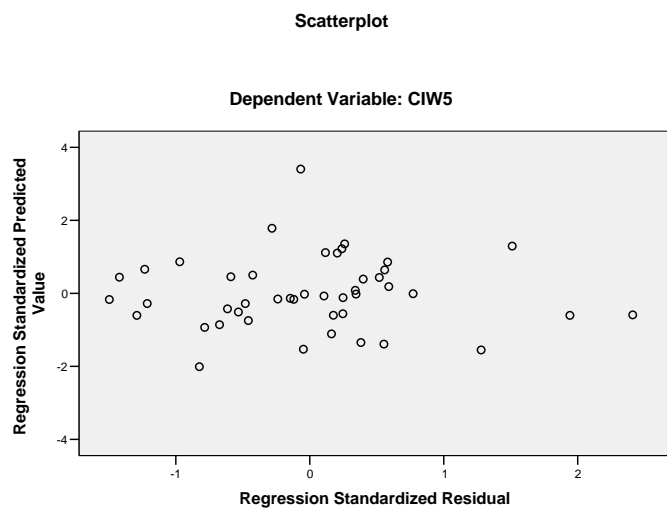


## Appendix E-11. Minneapolis: Weighted

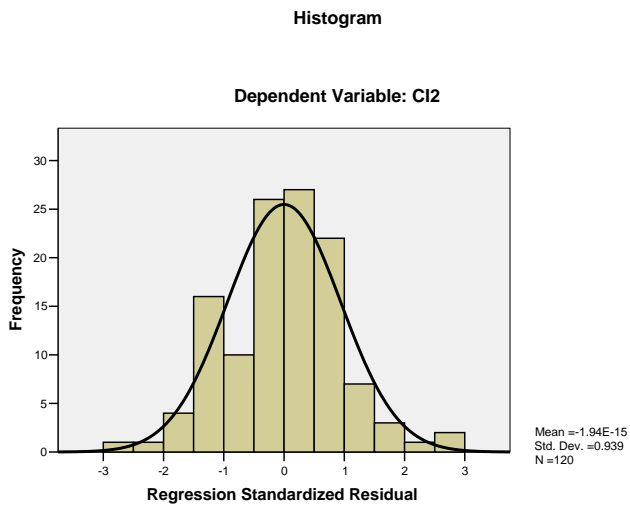
**Normal P-P Plot of Regression Standardized Residual**



## Appendix E-12. Minneapolis: Weighted

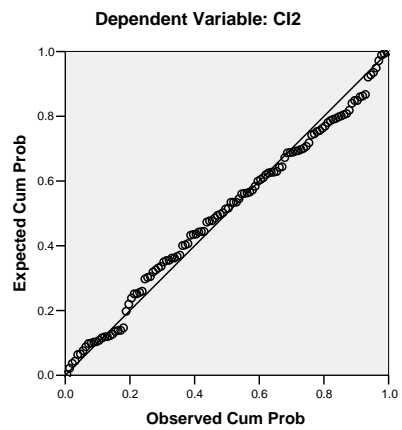


## Appendix E-13. Integrated: Unweighted – With Regional Dummy

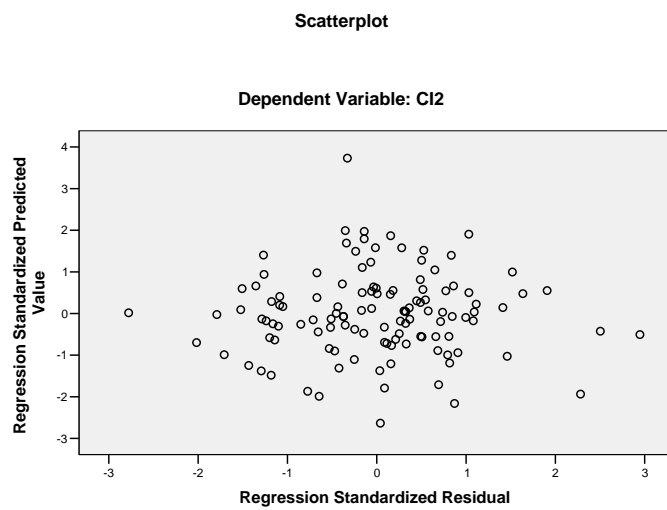


#### Appendix E-14. Integrated: Unweighted – With Regional Dummy

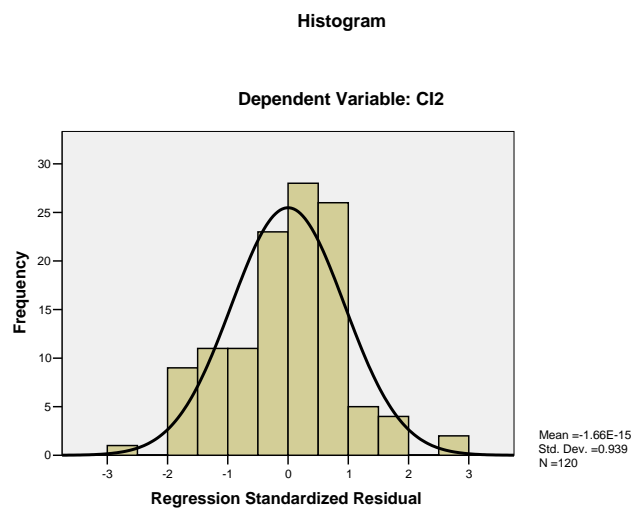
**Normal P-P Plot of Regression Standardized Residual**



## Appendix E-15. Integrated: Unweighted – With Regional Dummy

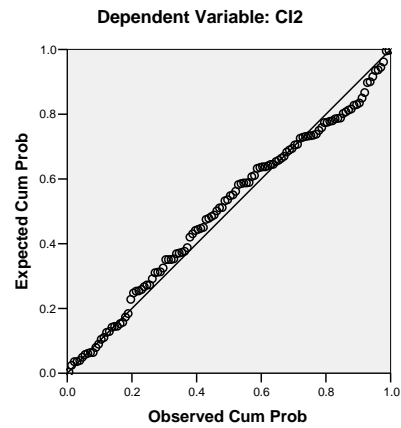


## Appendix E-16. Integrated: Unweighted – With Regional Integration Index



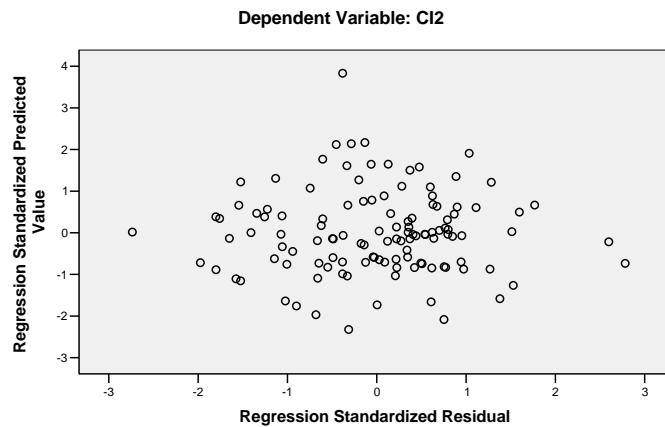
## Appendix E-17. Integrated: Unweighted – With Regional Integration Index

Normal P-P Plot of Regression Standardized Residual

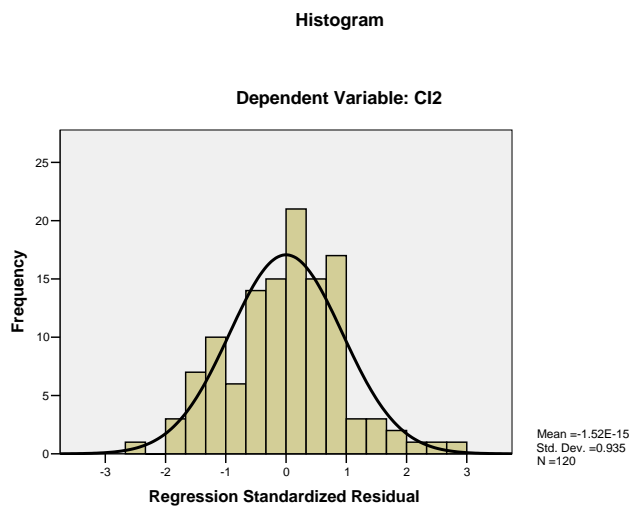


## Appendix E-18. Integrated: Unweighted – With Regional Integration Index

Scatterplot

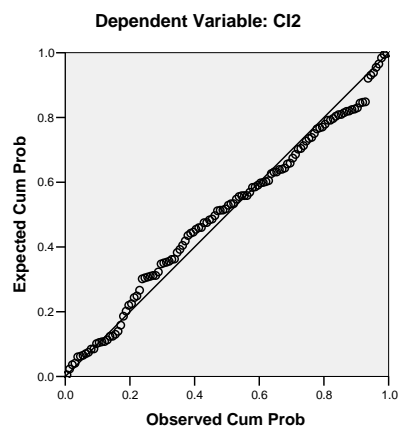


## Appendix E-19. Integrated: Unweighted – With Both Regional Dummy and RI

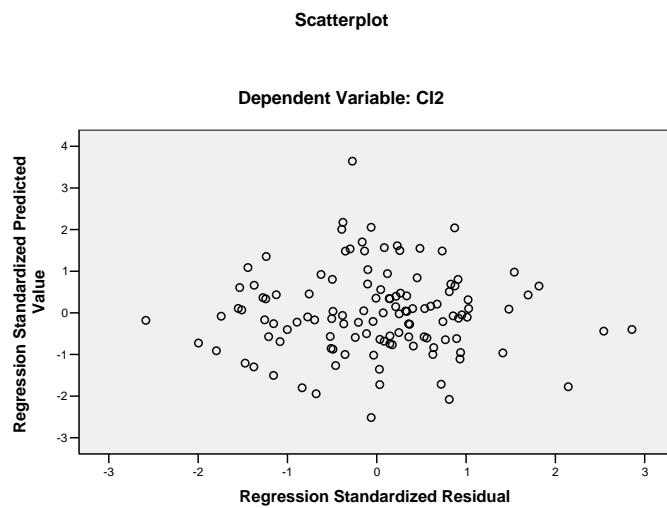


## Appendix E-20. Integrated: Unweighted – With Both Regional Dummy and RI

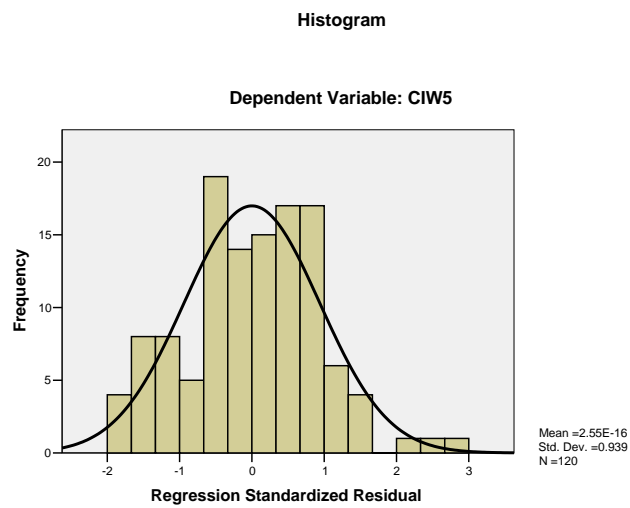
**Normal P-P Plot of Regression Standardized Residual**



Appendix E-21. Integrated: Unweighted – With Both Regional Dummy and RI

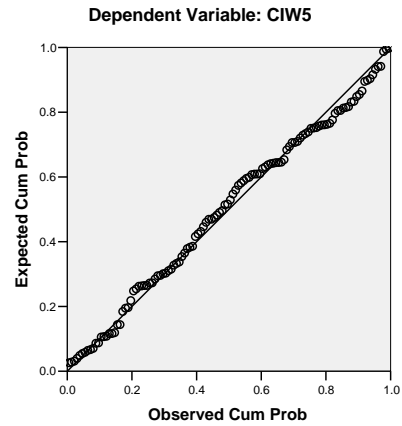


Appendix E-22. Integrated: Weighted – With Regional Dummy



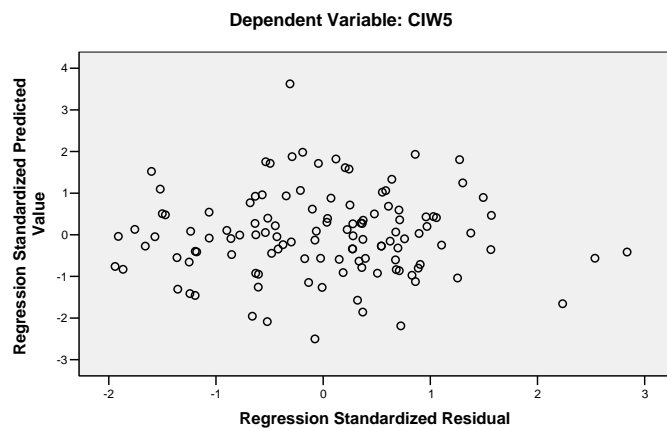
## Appendix E-23. Integrated: Weighted – With Regional Dummy

Normal P-P Plot of Regression Standardized Residual



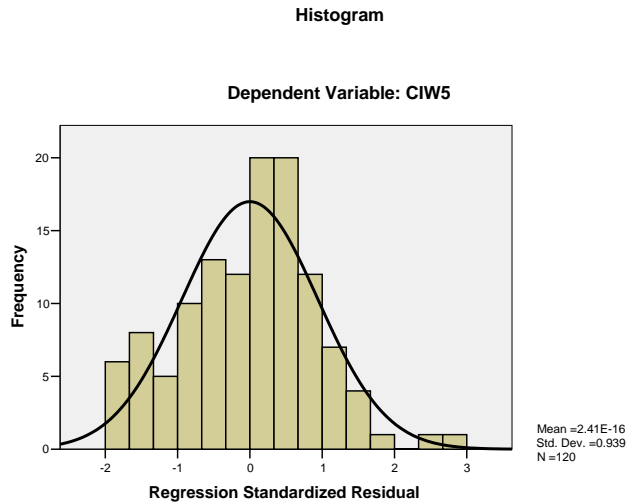
## Appendix E-24. Integrated: Weighted – With Regional Dummy

Scatterplot



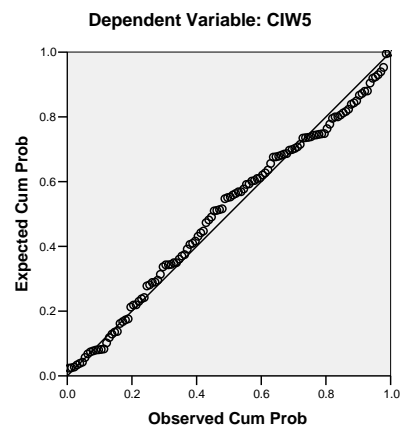


## Appendix E-25. Integrated: Weighted – With Regional Integration Index

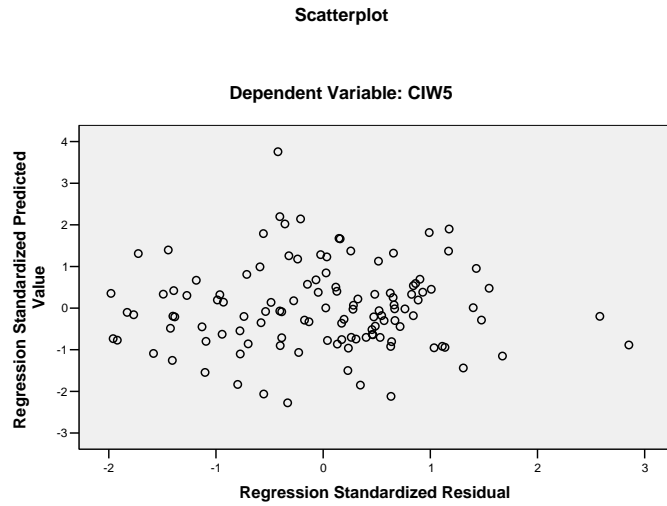


## Appendix E-26. Integrated: Weighted – With Regional Integration Index

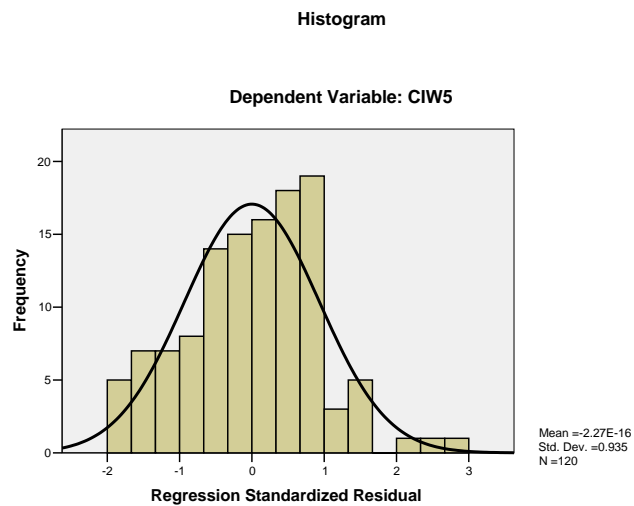
**Normal P-P Plot of Regression Standardized Residual**



## Appendix E-27. Integrated: Weighted – With Regional Integration Index

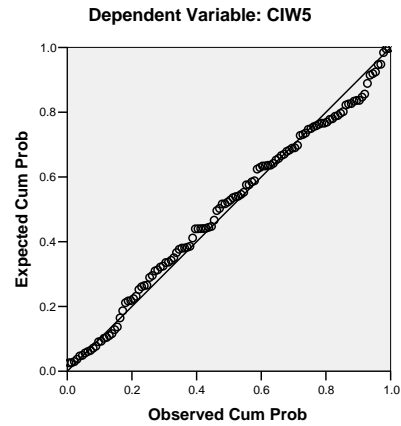


## Appendix E-28. Integrated: Weighted – With Both Regional Dummy and RI



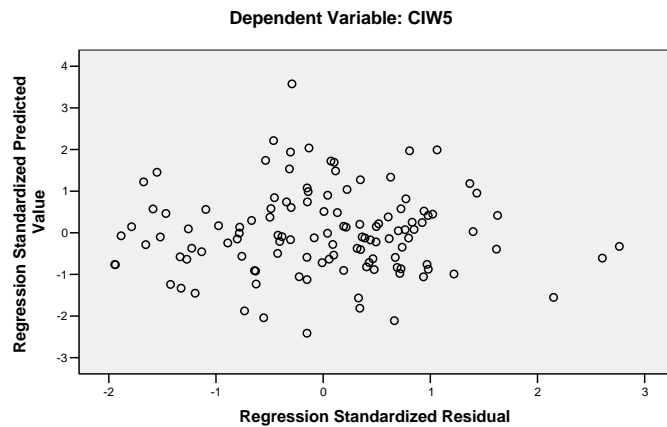
Appendix E-29. Integrated: Weighted – With Both Regional Dummy and RI

Normal P-P Plot of Regression Standardized Residual



Appendix E-30. Integrated: Weighted – With Both Regional Dummy and RI

Scatterplot



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